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## **The Dietary Deficiency of Cereal Foods with Reference to Their Content in "Antineuritic Vitamine."**

By CARL VOEGTLIN, G. C. LAKE, and C. N. MYERS, Division of Pharmacology, Hygienic Laboratory, United States Public Health Service, Washington, D. C.

*Introduction.*—Recent experimental work has called attention to the importance of certain so-called accessory foods or vitamins in their relation to proper nutrition. The work of Stepp, Hopkins, Funk, Osborne and Mendel, McCollum and Davis, and others, has demonstrated that a diet is not complete and does not permit of adequate nutrition unless it contains sufficient amounts of two accessory substances. One of these substances is essential in the prevention and cure of beriberi in man or polyneuritis of fowls, and has been termed the "antineuritic vitamine" or the water soluble B. The other substance occurs in certain foods rich in fat (butter, etc.), and has been designated as fat soluble A by McCollum and his coworkers.

This paper deals with the occurrence of the antineuritic vitamine in foods derived from wheat or corn. Researches of a similar nature have been made by other investigators, and the fact has been thoroughly established that all natural cereals contain an abundance of antineuritic vitamine, an amount considerably in excess of that needed when these cereals form the exclusive diet of animals.

Valuable as these investigations are in regard to the feeding of animals and the purely scientific aspects of nutrition, the previous investigators have not sufficiently taken into consideration the fact that cereals in the form of the entire grain are only rarely consumed by man. The bulk of the cereal component of the diet of our people is represented by wheat or corn bread. Wheat and corn bread are largely prepared from flour or corn meal which represents only part of the wheat or corn kernel. The commonly used "patent" flour, for instance, contains only about 70 per cent of the wheat from which it is milled. The question, therefore, arises as to whether or not bread made from "white" flour or "highly milled" corn meal includes all the essential food elements contained in the intact grain.

The present paper reports a continuation of work done by others with respect to the antineuritic vitamine of corn and wheat products

used in nutrition. In a succeeding paper certain other dietary attributes of these foods will be considered in their relation to growth.

*Previous work.*—Experimental and clinical work on the etiology of beriberi has demonstrated the fact that polished rice may give rise to beriberi in man and to polyneuritis in fowls when used to the more or less complete exclusion of other foods. It has, furthermore, been shown that substitution of unpolished rice for polished rice prevents the occurrence of beriberi and polyneuritis. Moreover, it has been found that the rice polishings contained the antineuritic vitamine, the substance which is responsible for the prevention and cure of beriberi. Thus unquestionable proof was furnished that the "highly milled" (polished or white) rice has been deprived of an essential dietary element resident in the peripheral layers of the intact grain.

Because of these results with rice, the attention of investigators interested in this field was soon attracted to wheat bread. Thus Holst (1907), in experimental studies relating to ship beriberi and scurvy, carried out on pigeons a few experiments with rye and wheat bread, baked with yeast or baking powder. The pigeons on wheat bread developed symptoms and nerve degeneration characteristic of polyneuritis. The addition of yeast to the wheat flour seemed to delay the onset of the symptoms, but did not prevent a gradual loss of body weight (30 per cent). The pigeons fed on rye bread or whole wheat bread, however, lived for four months without showing any abnormalities. Holst does not mention the kind of wheat flour used in his experiments beyond stating that it was "the flour ordinarily used by Norwegian sailors in tropical waters."

Simpson and Edie (1911) describe a few additional experiments on the feeding of "whole wheat" bread and "white" bread to pigeons. On the "whole wheat" bread the birds continued active and well, and two pigeons paired and successfully hatched the two eggs. The pigeons fed "white" bread died after an average of 29 days with an average loss of weight of 26 per cent. Typical paralytic symptoms were observed in these animals and marked degenerative changes were found in their peripheral nerves. Several of these birds were treated when extremely weak with either yeast or beans. Great improvement in the condition of the birds followed this treatment.

The reports of Little (1912 and 1914) concerning his five years' experience with epidemics of beriberi in Newfoundland are very important, as they show that in this locality beriberi was due to a diet limited to "white" bread made from highly milled flour, molasses, a small quantity of fish, and tea. This author furthermore presents evidence to the effect that the substitution of "whole wheat" bread for the "white" bread was followed by a disappearance of the dis-

ease, in spite of the fact that the other dietary and hygienic conditions were apparently left unchanged.

At Little's suggestion, Ohler (1914) carried out a number of experiments with chickens, in order to furnish experimental proof for the contention that a more or less exclusive diet of "white" bread was the chief cause of the occurrence of beriberi in Newfoundland. Fourteen chickens fed on "white" bread, made from "highly milled" flour with or without the addition of yeast, died within 28 to 40 days. Before death the birds exhibited symptoms of polyneuritis, and histological examination of the peripheral nerves revealed considerable degeneration. Five fowls fed on "whole-wheat" bread and two on whole wheat lived in perfect health for 75 days, when the experiment was discontinued.

Similar experiments were carried out by Wellmann and Bass (1913) and by Voegtlin, Sullivan, and Myers (1916).

*Nature of the present experiments.*—Pigeons and chickens were used in these experiments for the reason that they are better adapted for feeding experiments with cereals than other animals. Only full-grown birds were used. The symptoms resulting from a deficiency of the diet in antineuritic vitamine are easily recognized in fowls, and curative experiments yield striking results. The observations made on birds were confirmed in experiments on dogs, hogs, and a large number of white mice (these results will be published elsewhere). As a rule, the birds were given as much of the various corn and wheat foods as they cared to eat. In a few experiments, by mistake they did not receive sufficient food, a fact which caused them to lose in body weight (experiments Nos. 18, 20, and 25). The appearance of polyneuritic symptoms was regarded as indicating that the particular food in question was deficient in antineuritic vitamine. The polyneuritic symptoms were always preceded by a gradual loss in body weight. The peripheral nerves of a large number of the birds were examined histologically at the end of the period of observation, and always confirmed the conclusions drawn from clinical observations. Birds exhibiting polyneuritic symptoms during life always showed marked myelin degeneration of their peripheral nerves.

The corn and wheat products were obtained in the open market and came from various modern roller mills, old-fashioned buhr mills and various bakeries.

As a rule, the total phosphorus pentoxide content of the dried products was determined, as it had been shown by other investigators that the phosphorus and vitamine contents of rice of various degrees of milling run roughly parallel.

In order definitely to prove that the symptoms observed in the animals kept on deficient foods were due to a deficient supply of

antineuritic vitamine, some of the pigeons were treated after the onset of the disease with various vitamine preparations (Funk's vitamine fraction) obtained from brewer's yeast, ox liver, or rice polishings. Further evidence was obtained from protective experiments in which there was added to the deficient food a small quantity of a vitamine preparation. This material was prepared according to the method described by Seidell (1914). The so-called activated Lloyd's reagent consists of fuller's earth (Lloyd's reagent), which has been treated with autolyzed yeast filtrate. It contains an average of 2.3 per cent of total nitrogen, which is derived from the basic substances of autolyzed yeast filtrate.

As it was confirmed in the course of the investigation that white bread was deficient in antineuritic vitamine, a few experiments were made to determine the effect of adding an extract of "whole-wheat" bread to the diet of "white" bread. This extract was prepared as follows: Two hundred and eighty grams of "whole-wheat" bread were extracted twice at room temperature with one liter of 50 per cent alcohol containing 25 cubic centimeters of concentrated hydrochloric acid. The filtered extract was concentrated in vacuo to a small volume, so that 1 cubic centimeter of the extract corresponded to 1 gram of fresh "whole-wheat" bread. The extract was free from fat and contained 11.5 per cent of solids.

The animals were kept in wire cages, tap water being supplied daily and grit from time to time.

The bread was fed in the form in which it was received from the dealer. Water was added to the flour, which was made into cakes. The cakes were dried at 45° C. and broken up into pieces of suitable size.

Throughout this paper the words "highly milled" are meant to indicate that the product was milled in a manner to eliminate most of the superficial layers and the germ of the grain. "White" bread is the ordinary wheat bread made from "highly milled" flour. "Patent" flour is the word applied by the milling industry to a flour which is of very fine texture and almost white in appearance. It contains practically no bran or germ. By "old-fashioned" Graham flour is meant a wheat flour which is obtained by grinding wheat in buhrstone mills with the omission of bolting. "Whole-wheat" flour is a designation of a flour which contains the whole-wheat berry, with the exception of part of the bran. "First-clear" flour resembles "patent" flour but contains a small amount of the peripheral portions of the grain. Similar designations have been used for the corn foods. The following tables and charts will illustrate the main results obtained in this investigation.



**EXPERIMENT 1.**—"Old-fashioned" Graham flour milled in the presence of one of authors (V) in an old-fashioned buhr mill in Spartanburg, S. C.

[Appearance: Typical Graham flour, containing considerable bran and germ.  $P_2O_5$  content: 0.866 per cent.]

(Beginning with the twenty-fifth day of the experiment, a similar Graham flour was substituted for the above product.)

No. of pigeon.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.	Notes.
		<i>Days.</i>		
308	No symptoms.....	118	+ 2	Sciatic normal.
309	.....do.....	118	+ 9	Do.
312	.....do.....	123	+21	Sciatic not examined.
313	.....do.....	96	+12	Do.
311	.....do.....	113	+13	Do.

*Remarks.*—On the 25th day of the experiment the food was changed to another old-fashioned Graham flour ( $P_2O_5=0.82$  per cent), obtained from another buhrstone mill in Spartanburg, S. C. This mill had been in operation for at least 50 years. Slight changes were made in its power plant, substituting turbines for the "water wheels." The process of milling, however, was still the same as at the time of the opening of the mill.

Both of these flours contained sufficient antineuritic vitamine to prevent polyneuritic symptoms and loss of body weight. Their  $P_2O_5$  content is almost as high as that of whole wheat.

**EXPERIMENT 2.**—"Whole wheat flour" milled in St. Louis, Mo.

[Appearance: Grayish white.  $P_2O_5$  content: 0.61 per cent.]

No. of pigeon.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.	Notes.
		<i>Days.</i>		
332	No symptoms.....	90	+21	Sciatic normal.
333	.....do.....	90	-28	Do.
336	.....do.....	91	-33	Do.
337	.....do.....	103	-22	Do.
335	.....do.....	96	-36	Do.

*Remarks.*—Pigeon 337 died apparently from accidental causes, as the necropsy revealed a piece of copper wire, which had perforated the craw and prevented the animal from eating. The other pigeons appeared in perfect health until a few days previous to end of period of observation. No definite paralytic symptoms were observed in any of these birds and the histological examination of the sciatic nerves also yielded negative results.

This flour contained sufficient antineuritic vitamine to prevent polyneuritic symptoms and fatty degeneration of the peripheral nerves. Its  $P_2O_5$  content is somewhat lower than that of whole wheat.

EXPERIMENT 3.—*Wheat flour obtained from old-fashioned buhr mill, Roebuck, S. C.*[Appearance: White, with yellowish tinge; contains particles of bran.  $P_2O_5$  content: 0.265 per cent.]

No. of pigeon.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.	Notes.
315	No definite symptoms.....	Died after 109 days.....	-36	No treatment.
317	Twenty-second day.....	Died after 27 days.....	-15	Do.
318	No definite symptoms.....	Killed after 158 days.....	-28	Do.
319	No symptoms.....	.....do.....	+ 4	Do.

*Remarks.*—Sciatic nerves of pigeons 315 and 319 did not reveal any degenerative changes and were to all appearances normal. Sciatic nerve of pigeon 318 revealed a slight degeneration.

This flour represents a fairly "highly milled" product. It was bolted through a fine silk cloth, which eliminated a considerable part of the germ and bran. In physical appearance this flour is not as refined as "patent" flour. It obviously contains more antineuritic vitamine than "patent" flour but not as much as "whole-wheat" flour. The  $P_2O_5$  content is also low.

EXPERIMENT 3a.—*Wheat flour obtained from old-fashioned buhr mill, Spartanburg, S. C.*[Appearance: White with yellowish tinge; contains small particles of bran.  $P_2O_5$  content: 0.27 per cent.]

No. of pigeon.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.	Notes.
338	Remained well.....	Killed after 118 days.....	-13	Not treated.
339	No symptoms.....	Died after 102 days.....	-12	Do.
340	Remained well.....	Killed after 118 days.....	- 6	Do.
341	.....do.....	.....do.....	- 5	Do.
343	Thirtieth day, doubtful.....	Died after 38 days.....	-34	Do.

*Remarks.*—Sciatic nerve of pigeon 339 showed slight degeneration. There were never noticed any definite symptoms of polyneuritis in this bird. Sciatic nerve of pigeons 338 and 340 did not exhibit any degeneration; that of pigeon 341 revealed slight degeneration, although the bird seemed to be in perfect health when it was killed.

EXPERIMENT 4.—*"Patent wheat flour" obtained from a Maryland roller mill.*[Appearance: Pure white; no bran can be detected.  $P_2O_5$  content: 0.25 per cent.]

No. of pigeon.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.	Notes.
326	Twenty-second day.....	Died after 43 days.....	-22	Relieved symptoms on thirtieth day by an extract of rice polishings.
327	Fifteenth day.....	Died after 67 days.....	-44	Relieved symptoms on thirtieth and fifty-seventh days by yeast vitamine.
328	.....do.....	Died after 26 days.....	-21	Not treated.
329	Tenth day.....	Died after 16 days.....	-31	Do.
330	.....do.....	Died after 12 days.....	- 7	Do.
331	Twenty-second day.....	Died after 46 days.....	-20	Relieved symptoms on twenty-eighth day by an extract of rice polishings.

*Remarks.*—Pigeon 326 received, on thirtieth day of experiment, 0.5 cubic centimeter of Funk's vitamine fraction from an extract of rice polishings. Bird was greatly improved as a result of this treatment, but gradually developed a relapse several days later. Pigeon 327 received, on thirtieth and fifty-seventh days of experiment, 0.5 cubic centimeter autolyzed yeast vitamine, prepared by means of Lloyd's reagent (dose equivalent to 40 cubic centimeters autolyzed yeast filtrate).

The pigeons of this series all developed polyneuritis within three weeks. The flour was "highly milled" and had a low phosphorus content. The administration of an active preparation of antineuritic vitamine promptly relieved the symptoms.

EXPERIMENT 5.—"Patent" wheat flour obtained from a roller mill in Virginia.

[Appearance: Pure white; no particles of bran or germ.  $P_2O_5$  content: 0.20 per cent.]

No. of pigeon.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.	Notes.
344	Fifteenth day .....	Died after 29 days .....	-37	Not treated.
345	Twenty-second day .....	Died after 30 days .....	-34	Do.
346	Tenth day .....	Died after 26 days .....	-43	Do.
347	Fifteenth day .....	Died after 39 days .....	-37	Do.
348	Tenth day .....	Died after 36 days .....	-14	Temporary improvement after administration of "vitamine."
349	Fifteenth day .....	Died after 19 days .....	-28	Not treated.

*Remarks.*—All of the pigeons of this lot developed typical polyneuritis between the tenth and twenty-second days after feeding was begun, and died with marked loss in body weight. Pigeon 348 was given one dose of 0.3 cubic centimeter of a fluid antineuritic preparation, obtained from autolyzed brewers' yeast, which caused a temporary improvement in the symptoms.

EXPERIMENT 6.—"Patent flour" milled in a Michigan roller mill.

[Appearance: Pure white; contains no bran.  $P_2O_5$  content: 0.206 per cent.]

No. of pigeon.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.	Notes.
320	Tenth day .....	Died after 38 days .....	-27	Not treated.
321	Fifteenth day .....	do .....	-13	Do.
322	Eighteenth day .....	Died after 34 days .....	-43	Symptoms relieved on the eighteenth day by a preparation made from rice polishings.
323	Fifteenth day .....	Died after 18 days .....	-38	Not treated.
324	do .....	Died after 40 days .....	-30	Do.
325	do .....	Died after 83 days .....	-43	Symptoms relieved on twentieth and thirty-third days by a preparation made from yeast.

*Remarks.*—Pigeon 322 received 0.5 cubic centimeter of a dilute extract of rice polishings (vitamine fraction), which caused complete disappearance of severe symptoms of paralysis. Pigeon 325 was given, on the twentieth day, 0.5 cubic centimeter of an extract of brewers' yeast (vitamine fraction); severe paralytic symptoms disappeared within 24 hours. On the thirty-third day another attack of polyneuritis was completely relieved by a dose of 1 cubic centimeter autolyzed yeast vitamine, prepared

by means of Lloyd's reagent (dose equivalent to 40 cubic centimeters autolyzed yeast filtrate). The pigeon remained free from any symptoms after this treatment for about 25 days.

EXPERIMENT 7.—*"Straight patent flour" milled from winter wheat at a roller mill in South Carolina.*

[Appearance: White; contains a few particles of bran.  $P_2O_5$  content: 0.216 per cent.]

No. of pigeon.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.	Notes.
351	Twentieth day.....	Died after 36 days.....	-27	Not treated.
352	do.....	Died after 38 days.....	-39	Do.
353	Twenty-sixth day.....	Killed after 118 days.....	<sup>1</sup> -34	Relieved symptoms on twenty-sixth day by a preparation made from ox liver; on thirty-fourth day with yeast preparation. Diet changed on fortieth day.
354	Twentieth day.....	Died after 32 days.....	-28	Relieved symptoms on twenty-sixth day by a preparation made from ox liver.
350	Twenty-sixth day.....	Died after 57 days.....	-48	Not treated.

<sup>1</sup> Fortieth Day.

*Remarks.*—Diet of pigeon 353 was changed, on fortieth day of experiment, to a wheat flour obtained from an old-fashioned buhrmill in South Carolina. This change caused the pigeon to regain some of the lost weight (original weight 249 grams, weight at period of dietary change 165 grams; weight at end of experiment, 43 days later, 188 grams). Pigeon was killed after 118 days, being free from symptoms of polyneuritis. Sciatic nerve did not reveal any degenerated fibers.

This experiment, in conjunction with those preceding, shows that a "highly milled" flour with low phosphorus content leads to polyneuritis within about three weeks. The symptoms are due to a deficiency of this food in antineuritic vitamine, as demonstrated by the curative effect of a small quantity of an antineuritic extract from yeast or ox liver.

EXPERIMENT 8.—*"Patent wheat flour" obtained from a Minnesota roller mill through the open market.*

[Appearance: Pure white; no bran can be detected.  $P_2O_5$  content: 0.25 per cent.]

No. of pigeon.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.	Notes.
		<i>Days.</i>		
1	Twentieth day.....	25	-39	Died of polyneuritis; sciatic degenerated.
2	Eighteenth day.....	37	-40	Do.
3	Thirty-first day.....	38	-33	Severe paralysis relieved with antineuritic material.
4	Twenty-second day.....	38	-35	Do.
5	Twelfth day.....	17	-22	Died of polyneuritis; sciatic degenerated.
6	Twenty-eighth day.....	36	-24	Do.

*Remarks.*—On this flour the birds developed polyneuritis in about the same time as on highly milled rice. Marked degeneration of the sciatic was found on histological examination. The  $P_2O_5$  content of the flour was low (less than one-third that of "whole wheat").

EXPERIMENT 9.—"White-wheat bread" obtained from a bakery in Washington, D. C.

[Appearance: Good; no bran.  $P_2O_5$  content: 0.26 per cent.]

No. of pigeon.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.	Notes.
		<i>Days.</i>		
37	Forty-second day.....	45	-36	Polyneuritis cured by extract of "whole-wheat bread."
38	Forty-fifth day.....	50	-42	Not treated; died of polyneuritis; sciatic degenerated.
39	Fifty-fourth day.....	64	-23	Severe polyneuritis cured by extract of "whole-wheat bread."
40	Eighteenth day.....	40	-38	Do.
41	Thirty-first day.....	35	-41	Not treated; died of polyneuritis; sciatic degenerated.
42	Seventeenth day.....	40	-39	Do.

*Remarks.*—The bread used in this experiment was made from a mixture of "patent" and "first clear" flour, yeast, sodium chloride, compound lard, molasses, and evaporated milk. The exact formulas could not be obtained. This bread had a low phosphorus content and led to polyneuritic symptoms in the pigeons of this series in about three to five weeks. It is seen that the incubation period is somewhat longer (three to five weeks) than in birds kept on "patent" flour (2 to 3 weeks). This incubation period is also longer than that observed when polished rice forms the exclusive diet of pigeons. Three of the pigeons were given an extract of the "whole-wheat" bread used in experiment 15. Chart 3 illustrates the gradual loss in body weight on a diet of white bread and the slow recovery after treatment with the extract of "whole-wheat" bread was begun. The addition of yeast and evaporated milk to the flour, in the process of bread making, did not seem to furnish sufficient antineuritic vitamine to prevent polyneuritis.

EXPERIMENT 10.—White-wheat bread, ordinary baker's bread, purchased on the open market in Washington, D. C., and Spartanburg, S. C.

[Appearance: White; contained no bran.  $P_2O_5$  content: 0.26 and 0.19 per cent.]

No. of pigeon.	First appearance of polyneuritis.	Died after—	Change in body weight in per cent of original weight.
		<i>Days.</i>	
116	Thirty-second day.....	32	Not determined.
120	Twentieth day.....	21	Do.
300	Twenty-fifth day.....	42	-15.
304	Twenty-first day.....	29	-29.
305	Twenty-fourth day.....	43	-4.
307	Twenty-fifth day.....	46	-18.
401	Fourteenth day.....	15	Not determined.
402	Fortieth day.....	40	Do.

*Remarks.*—From these experiments it would seem that the incubation period of polyneuritis is somewhat prolonged (about 14 days) as a result of the addition of yeast and evaporated milk to the highly milled flour in the process of bread making. Both yeast and milk are known to contain antineuritic vitamine.



EXPERIMENT 11.—*High grade "patent" wheat flour + Lloyd's reagent (inactive). This flour was obtained from a Minnesota roller mill and 1 per cent of Lloyd's reagent incorporated with it.*

[Appearance: White; no coarse particles.  $P_2O_5$  content: 0.25 per cent.]

No. of pigeon.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.	Notes.
		<i>Days.</i>		
13	Thirty-first day.....	38	-43	Experiment discontinued after 38 days.
14	Thirty-eighth day.....	38	-27	Do.
15	Twenty-fifth day.....	38	-40	Died of polyneuritis; sciatic nerve degenerated.
16	Thirty-first day.....	38	-38	Experiment discontinued after 38 days.
17	.....do.....	38	-32	Do.
18	.....do.....	54	-48	On fifty-fourth day pigeon was dying; killed with chloroform; sciatic degenerated.

*Remarks.*—This experiment shows that "patent" flour, with the addition of Lloyd's reagent (fuller's earth) which has not been activated by autolyzed yeast, does not prevent the appearance of polyneuritis in pigeons. These results are in marked contrast with experiments illustrated by chart 5.

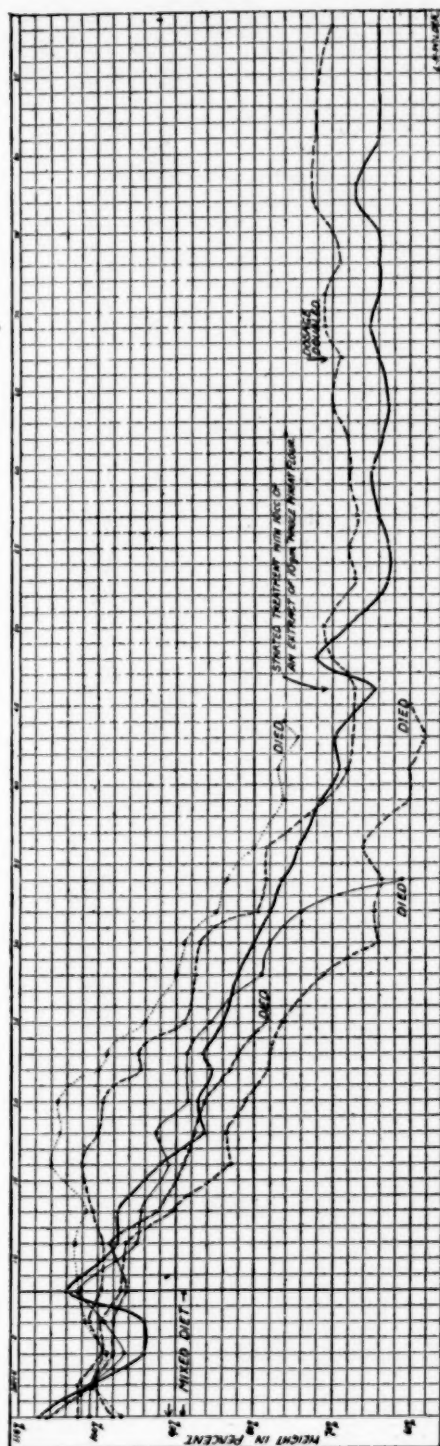


CHART 1.—Experiment 12. Weight curve of pigeons on “highly milled” (patent) wheat flour. All of the pigeons of this group developed polyneuritis within 21 days and lost considerable body weight. Four of the birds died after having been on this diet 17, 26, 36, and 37 days, respectively. The two remaining birds received an extract of “whole wheat” flour and were cured of their paralytic symptoms, but did not recover their lost body weight during the next 40 days.

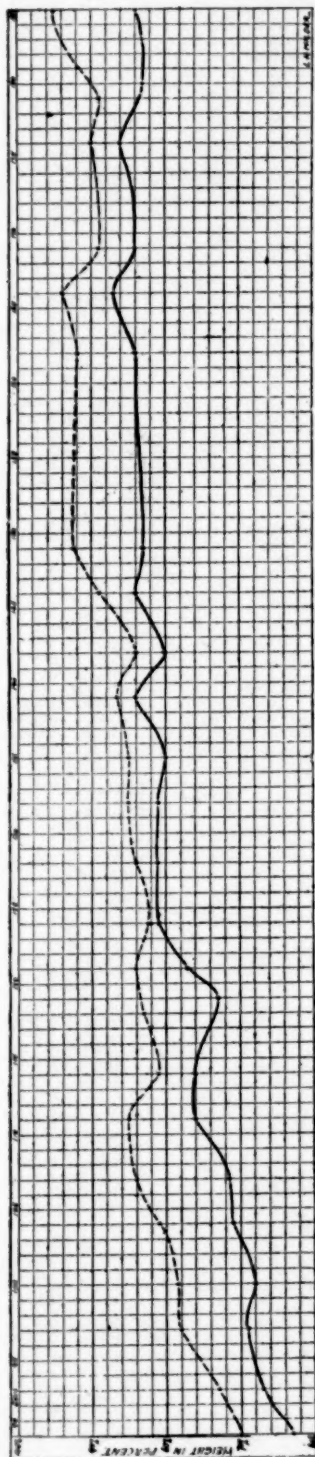


CHART 2 (Continuation of Chart 1).—Experiment 12. Recovery of body weight of pigeons on diet of "highly milled" (patent) wheat flour, as a result of the addition to the flour of 1 per cent activated Lloyd's reagent. The previous administration of an extract of "whole wheat" flour had cured the pigeons of the paralytic symptoms, but had not led to a recovery of body weight. The amount of extract was probably not sufficient for this purpose.



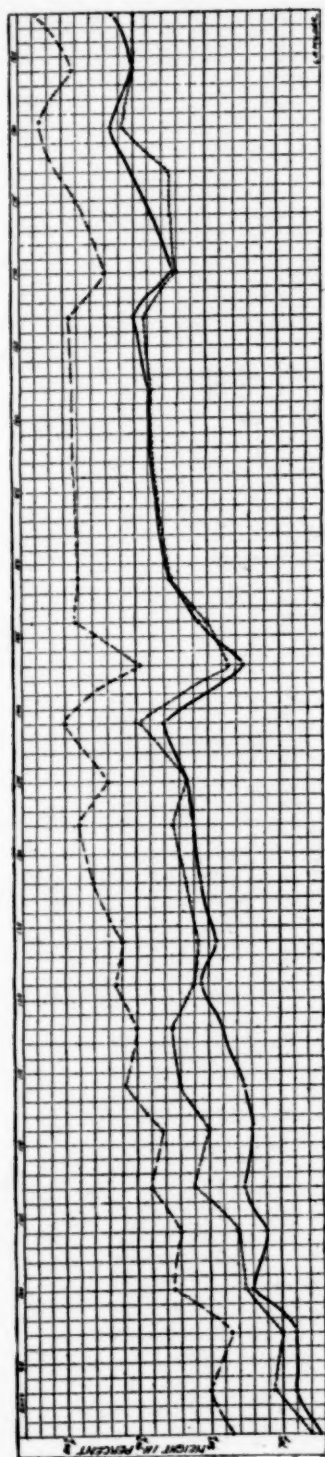


CHART 4 (Continuation of Chart 3).—Recovery of pigeons on diet of "white bread" as a result of the daily administration of 50 mg. of activated Lloyd's reagent.

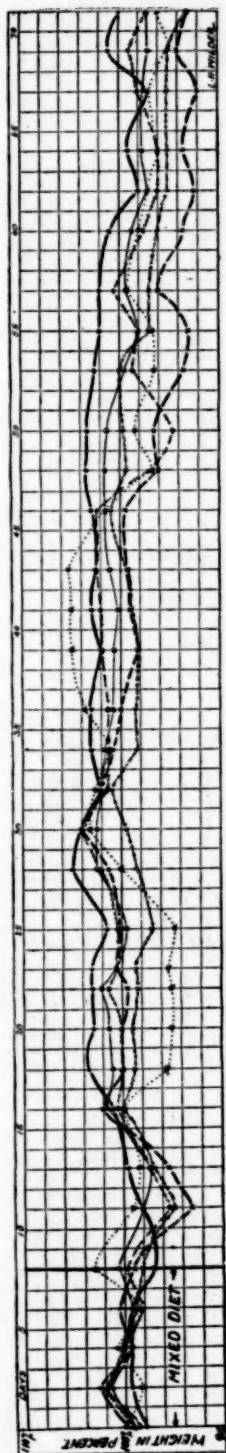


CHART 5.—Experiment 14. Weight curve of pigeons on diet of "highly milled" (patent) wheat flour + 0.5 per cent activated Lloyd's reagent, showing prevention of loss of body weight in pigeons on this mixture. In another experiment, the same amount of *inactive* Lloyd's reagent was added to the patent flour. The pigeons developed polynneuritis within three weeks and lost about 30 per cent of body weight, thus showing that fullers' earth per se can not prevent polynneuritis.



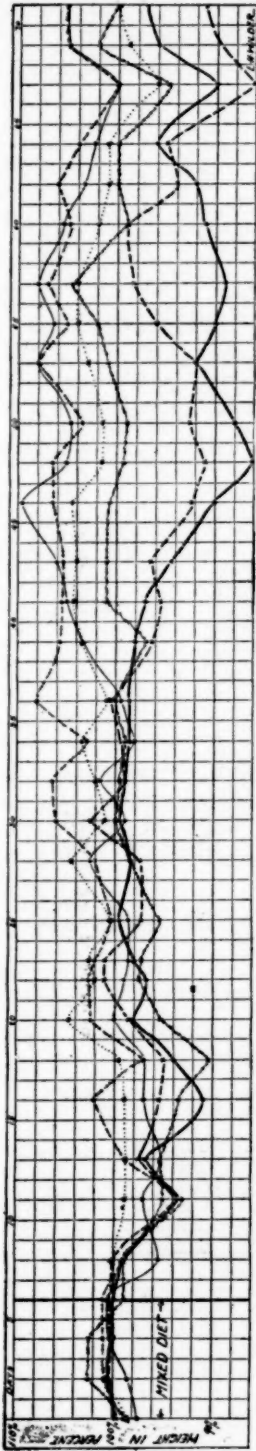


CHART 6.—Experiment 15. Weight curve of pigeons on diet of "whole wheat" bread, showing that "whole wheat" bread contains sufficient antineuritic vitamin to prevent a loss in body weight of pigeons fed exclusively on this diet. The birds of this series did not develop any symptoms of polyneuritis.

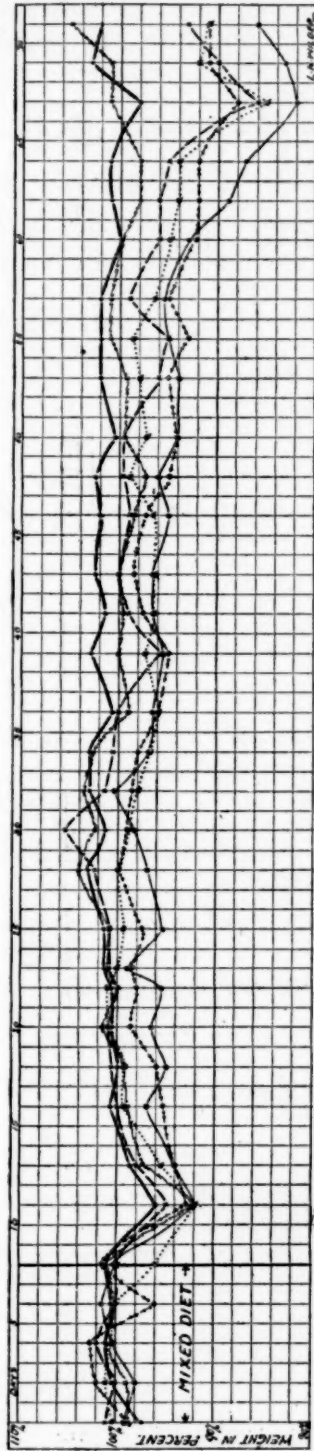


CHART 7.—Experiment 16. Weight of pigeons on diet of "whole wheat" flour. This chart shows that the pigeons fed on "whole wheat" flour alone do not lose weight. This food is adequate as the sole source of antineuritic vitamin. No symptoms of polyneuritis were observed in any of these birds.

EXPERIMENT 17.—*Whole corn.*[P<sub>2</sub>O<sub>5</sub> content: 0.76 per cent.]

No. of chicken.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.
		<i>Days.</i>	
6	No symptoms.....	222	-14
10	.....do.....	428	- 5
11	.....do.....	188	- 2

*Remarks.*—The animals of this group were healthy, full-grown chickens. They were kept in individual small cages throughout the period of observation. The lack of cage space may account for the trivial loss in body weight, as it is very difficult to keep fowls in perfect condition in such narrow confinement for so long a time.

EXPERIMENT 18.—*“Old process water-ground corn meal” obtained from an old-fashioned buhr mill in Georgia.*[Appearance: Contains large particles of bran and germ. P<sub>2</sub>O<sub>5</sub> content: 0.659 per cent.]

No. of pigeon.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.	Notes.
		<i>Days.</i>		
66	No symptoms.....	150	-30	Not treated.
67	.....do.....	73	-36	Do.

*Remarks.*—Pigeons 66 and 67 remained perfectly well, but lost considerable weight. This loss of weight was due to the underfeeding of these birds. They received only 10 grams corn meal daily, instead of 15 to 20 grams. In spite of the loss of weight, these animals did not exhibit the slightest signs of polyneuritis during the long period of observation.

EXPERIMENT 19.—*Corn grits (hominy) obtained from an old-fashioned buhrstone mill in South Carolina.*[Appearance: Practically all the bran and germ mixed with the finer endosperm. P<sub>2</sub>O<sub>5</sub> content: 0.668 per cent.]

No. of pigeon.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.	Notes.
		<i>Days.</i>		
98	No symptoms.....	152	-11	Not treated.
99	No symptoms; escaped.....	98	( <sup>1</sup> )	Do.
96	No symptoms.....	77	+9	Do.

<sup>1</sup> Not determined.

**EXPERIMENT 19a.**—Same as used in experiment 19, except that the larger particles of bran were removed by passing through a coarsely meshed sieve.

[P<sub>2</sub>O<sub>5</sub> content: 0.59 per cent.]

No. of pigeon.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.	Notes.
		<i>Days.</i>		
102	No symptoms.....	152	— 8	Not treated.
103	.....do.....	152	— 6	Do.
100	.....do.....	152	—10	Do.

**EXPERIMENT 20.**—Corn meal used at Milledgeville State Hospital, Milledgeville, Ga.

[Appearance: Contains considerable bran and germ. P<sub>2</sub>O<sub>5</sub> content: 0.677 per cent.]

No. of pigeon.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.	Notes.
		<i>Days.</i>		
72	No symptoms.....	52	—38	Not treated.
73	.....do.....	84	—15	Do.

*Remarks.*—Both pigeons were underfed, receiving only 10 grams of cornmeal daily. This fact accounts for the loss of body weight.

Pigeon 73 also received old process corn meal, obtained from the United States Penitentiary, Atlanta, Ga. (0.77 per cent P<sub>2</sub>O<sub>5</sub>). This bird remained well and apparently in perfect health for a period of 84 days when the experiment was discontinued. No symptoms of polyneuritis were exhibited.

**EXPERIMENT 21.**—Corn grits obtained from State institutions in Alabama and Georgia.

[Appearance: Highly milled. P<sub>2</sub>O<sub>5</sub> content: 0.169 and 0.201 per cent.]

No. of pigeon.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.	Notes.
61	Twenty-second day.....	41 days.....	<sup>1</sup> —22	Beginning with twenty-second day, daily dose 0.2 c. c. yeast extract.
62	Twentieth day.....	45 days.....	(?)	Beginning with twentieth day, daily dose 0.2 c. c. yeast extract.
64	Eighteenth day.....	Died after 34 days.....	—48	Not treated.
411	.....do.....	Died after 31 days.....	—33	Do.

<sup>1</sup> Twenty-second day of experiment.

<sup>2</sup> Not determined.

*Remarks.*—Pigeons 61 and 62 received grits which was used in the State hospital in Alabama (P<sub>2</sub>O<sub>5</sub> content=0.169 per cent). Pigeon 64 received grits used in a hospital for the insane in Georgia (P<sub>2</sub>O<sub>5</sub> content=0.201 per cent). All of these products contained very little bran and germ and were products of roller mills. Pigeons 61 and 62 responded very well to the treatment with yeast extract (disappearance of polyneuritic symptoms) and were in excellent condition at the end of the period of observation.

EXPERIMENT 22.—*“Highly milled” corn grits obtained from a roller mill in North Carolina.*[Appearance: Contains a trace of bran and germ.  $P_2O_5$  content: 0.21 per cent.]

No. of pigeon.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.	Notes.
91	Thirty-first day.....	Died after 72 days.....	Not determined...	Symptoms relieved on sixty-fourth day by yeast extract.
92	Twenty-third day.....	Died after 92 days.....	.....do.....	Improved on sixty-seventh day by alcoholic extract of yeast.
93	Thirty-first day.....	Died after 91 days.....	.....do.....	Improved on seventy-third day by yeast extract.
94	Forty-seventh day.....	Died after 95 days.....	.....do.....	Marked improvement on sixty-fifth day by 0.2 gm. alcoholic yeast extract.
97	Thirty-first day.....	Died after 64 days.....	.....do.....	Not treated.

EXPERIMENT 23.—*Highly milled corn grits and wheat bran. The grits were obtained from a roller mill in North Carolina and the bran from an old-process (stone) mill in South Carolina. The grits were the same as used in Experiment 22.*

[ $P_2O_5$  content of corn grits: 0.21 per cent.  $P_2O_5$  content of wheat bran: 2.48 per cent.]

No. of pigeon.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.	Diet.
87	No symptoms.....	140 days.....	0	35 gm. corn grits+10 gm. wheat bran.
85	.....do.....	.....do.....	+ 3	
86	.....do.....	.....do.....	- 9	
88	Sixty-seventh day.....	Died after 68 days.....	( <sup>1</sup> )	40 gm. corn grits+5 gm. wheat bran.
89	One hundred and forty-ninth day.....	226 days.....	+ 8	
90	One hundred and fiftieth day...	Died after 158 days.....	-31	

<sup>1</sup> Not determined.

*Remarks.*—Pigeons 85, 86, and 87 remained in perfect condition throughout the period of observation. Pigeons 88, 89, and 90 developed polyneuritic symptoms after a considerable length of time and two of the birds died of the disease. Pigeon 89, however, recovered from the paralytic attack, regained its lost body weight and appeared perfectly well at the end of the period of observation (226 days).

EXPERIMENT 24.—*Highly milled corn grits with addition of corn bran. The grits were the same as used in experiment 22, and the bran was obtained from old-process corn meal by passing the latter through a wide-meshed sieve.*

[ $P_2O_5$  content of corn grits: 0.21 per cent.  $P_2O_5$  content of corn bran: 0.787 per cent.]

No. of pigeon.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.	Notes.
81	Seventy-third day.....	Died after 113 days.....	Not determined...	Symptoms relieved on seventy-third day by 10 c. c. of dilute yeast extract.
101	.....do.....	Died after 115 days.....	.....do.....	Do.

*Remarks.*—Both pigeons of this lot received a mixture of 15 grams of corn grits and 5 grams of corn bran. The addition of corn bran caused a very considerable delay in the onset of polyneuritis (about 40 days). This furthermore seems to indicate that corn bran is probably not as rich in antineuritic substance as either wheat bran or possibly corn germ. On examination of the corn bran it was noticed that very little of the so-called aleuron layer adhered to the cellulose layer of the bran.

Both pigeons recovered temporarily from their paralytic symptoms as a result of a single dose of an antineuritic yeast preparation. The birds again recovered their lost appetite and remained free from symptoms for 38 days (pigeon 81) and 41 days (pigeon 101), respectively.

In order to discover whether a larger addition of corn bran would offer complete protection from polyneuritis, pigeon 74 was fed on a mixture of 10 grams highly milled corn grits (0.20 per cent  $P_2O_5$ ) and 10 grams corn bran (0.78 per cent  $P_2O_5$ ). The corn grits used were the same as fed to pigeon 411 (experiment 21) and had caused symptoms of polyneuritis on the eighteenth day after feeding was begun. Pigeon 74 remained well on this diet for two months, when the experiment was discontinued.

EXPERIMENT 25.—*Corn germ obtained from a roller mill in Indiana.*

[ $P_2O_5$  content: 2.81 per cent.]

No. of pigeon.	First appearance of polyneuritis.	Period of observation.	Change in body weight in per cent of original weight.	Notes.
		<i>Days.</i>		
70	No symptoms.....	85	-17	Not treated.
71	do.....	92	-20	Do.

*Remarks.*—These pigeons were underfed (see p. 649), receiving only 10 grams of food daily. They never exhibited the slightest symptoms of polyneuritis and were lively throughout the period of observation.

*Conclusions.*—(1) The results obtained in this investigation clearly show that for pigeons an exclusive diet of whole wheat or corn furnishes an adequate supply of antineuritic vitamine.

(2) The antineuritic vitamine seems to reside in the peripheral layers and the germ of these seeds, whereas the endosperm is relatively poor in this substance.

(3) If wheat and corn foods containing only a small percentage of the peripheral layers and germ of the seed are fed to pigeons and chickens exclusive of other food, polyneuritic symptoms appear on an average of three weeks after the beginning of the feeding period. The appearance of polyneuritis is preceded by a gradual loss in body weight. The birds can be relieved of their paralysis in a striking way by the oral or subcutaneous administration of a highly concentrated preparation of antineuritic vitamine derived from "whole-wheat" bread, yeast, ox liver, rice polishings, or beans.

(4) The addition of yeast (in amounts used by bakers) in the preparation of bread from highly milled flour does not prevent the appearance of polyneuritis in birds fed on this food, but prolongs slightly the period of incubation.



(5) The addition to "highly milled" flour, or bread made from "highly milled" flour, of a small amount of antineuritic vitamine preparation will correct this particular dietary deficiency, and will prevent the appearance of polyneuritis and the loss of body weight.

(6) The total phosphorus content of corn and wheat foods is a fairly satisfactory index of the amount of antineuritic vitamine contained in these foods. In a general way, it can be said that a high total phosphorus content is an indication that the particular corn or wheat product is relatively rich in antineuritic vitamine.

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# PREVALENCE OF DISEASE.

*No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.*

## UNITED STATES.

### EXTRA-CANTONMENT ZONES—CASES REPORTED WEEK ENDED APR. 30.

CAMP BEAUREGARD ZONE, LA.		CAMP EBERTS ZONE, ARK.	
Alexandria:	Cases.	Cerebrospinal meningitis:	Cases.
Cerebrospinal meningitis.....	1	Keo.....	1
Diphtheria.....	1	Chancroid:	
Malaria.....	6	England.....	1
Mumps.....	22	Gonorrhea:	
Smallpox.....	5	Lonoke.....	2
Tuberculosis.....	1	England.....	3
Whooping cough.....	4	Keo.....	1
Rural district:		Cabot, route 1.....	1
Measles.....	2	Hookworm:	
		England, route 1.....	1
		Malaria:	
		Lonoke, route 4.....	1
		England.....	17
		England, route 1.....	1
		England, route 2.....	1
		England, route 3.....	1
		Keo.....	2
		Measles:	
		Lonoke.....	7
		Lonoke, route 3.....	1
		England.....	1
		England, route 2.....	4
		Cabot.....	3
		Carlisle.....	2
		Mumps:	
		England.....	3
		Pellagra:	
		Lonoke, route 3.....	2
		Pneumonia:	
		Austin.....	2
		Carlisle.....	2
		Smallpox:	
		Lonoke.....	1
		England.....	6
		Keo.....	1
		Syphilis:	
		Lonoke, route 1.....	1
		England.....	4
		Tuberculosis:	
		England.....	3
		Jacksonville, route 1.....	1
		Whooping cough:	
		England.....	3
CAMP BOWIE ZONE, TEX.			
Fort Worth:			
Chicken pox.....	3		
Gonorrhea.....	5		
Measles.....	1		
Mumps.....	12		
Smallpox.....	15		
Typhoid fever.....	2		
CAMP DEVENS ZONE, MASS.			
Chicken pox:			
Lancaster.....	1		
German measles:			
Ayer.....	1		
Measles:			
Ayer.....	4		
Lancaster.....	2		
CAMP DODGE ZONE, IOWA.			
Des Moines:			
Diphtheria.....	4		
Gonorrhea.....	11		
Measles.....	1		
Scarlet fever.....	23		
Smallpox.....	19		
Syphilis.....	6		
Typhoid fever.....	1		
Whooping cough.....	2		
CAMP DONIPHAN ZONE, OKLA.			
Smallpox:			
Faxon.....	4		
Lawton.....	4		

## CAMP FUNSTON ZONE, KANS.

	Cases.
Chicken pox:	
Manhattan.....	2
Erysipelas:	
Manhattan.....	1
Measles:	
Junction City.....	
Manhattan.....	3
Riley.....	4
Mumps:	
Junction City.....	9
Manhattan.....	8
Pneumonia:	
Manhattan.....	3
Scarlet fever:	
Manhattan.....	4
Riley.....	1
Whooping cough:	
Manhattan.....	1

## CAMP GORDON ZONE, GA.

Atlanta:	
Chicken pox.....	4
Diphtheria.....	2
Gonorrhea.....	5
Measles.....	5
Mumps.....	10
Pneumonia.....	2
Scarlet fever.....	1
Septic sore throat.....	1
Smallpox.....	4
Syphilis.....	6
Tuberculosis.....	13
Whooping cough.....	2
Decatur:	
Mumps.....	4

## CAMP GREENE ZONE, N. C.

Charlotte Township:	
Diphtheria.....	2
Gonorrhea.....	14
Measles.....	9
Mumps.....	3
Scarlet fever.....	1
Syphilis.....	8
Trachoma.....	6
Tuberculosis.....	2
Whooping cough.....	6

## GULFPORT HEALTH DISTRICT, MISS.

Gulfport Health District:	
Chicken pox.....	4
Gonorrhea.....	2
Malaria.....	7
Measles.....	8
Mumps.....	3

## CAMP JOSEPH E. JOHNSTON ZONE, FLA.

Chicken pox:	
Jacksonville.....	3
Seaboard Air Line.....	1
Dysentery:	
Jacksonville.....	8
Gonorrhea:	
Highway.....	1
Jacksonville.....	8
Malaria:	
Eastport.....	3
Jacksonville.....	1

## CAMP JOSEPH E. JOHNSTON ZONE, FLA.—contd.

Measles:	Cases.
Jacksonville.....	7
South Jacksonville.....	1
Mumps:	
Jacksonville.....	5
Pellagra:	
Jacksonville.....	1
Pneumonia:	
Jacksonville.....	2
Syphilis:	
Jacksonville.....	8
Trachoma:	
Jacksonville.....	1
Tuberculosis:	
Jacksonville.....	7
Panama.....	1
Typhoid fever:	
Jacksonville.....	7
Whooping cough:	
Jacksonville.....	24
Ortega.....	2
South Jacksonville.....	1

## FORT LEAVENWORTH ZONE, KANS.

Leavenworth:	
Chicken pox.....	1
Diphtheria.....	1
Measles.....	15
Mumps.....	1
Scarlet fever.....	2
Smallpox.....	1
Leavenworth County:	
Erysipelas.....	1
Measles.....	10
Smallpox.....	1
Typhoid fever.....	1

## CAMP LEE ZONE, VA.

German measles:	
Ettricks.....	1
Dinwiddie County.....	1
Prince George County.....	4
Gonorrhea:	
Dinwiddie County.....	1
Measles:	
Ettricks.....	2
Hopewell.....	3
Petersburg.....	7
Prince George County.....	1
Mumps:	
Ettricks.....	6
Hopewell.....	1
Chesterfield County.....	3
Prince George County.....	2
Scarlet fever:	
Hopewell.....	2
Petersburg.....	2
Septic sore throat:	
Ettricks.....	2
Prince George County.....	2
Tuberculosis:	
Petersburg.....	1
Whooping cough:	
Ettricks.....	2
Hopewell.....	4
Prince George County.....	9

## CAMP LEWIS ZONE, WASH.

German measles:	Cases.
Gravelly Lake.....	1
Lake City.....	3
Loveland.....	6
Shawaney.....	1
Measles:	
Du Pont.....	4
Mumps:	
Du Pont.....	4
Whooping cough:	
Du Pont.....	3

## CAMP LOGAN ZONE, TEX.

Chancroid:	
Brookline.....	1
Goose Creek.....	1
Houston.....	1
Diphtheria:	
Houston.....	1
Gonorrhea:	
Houston.....	24
Hufsmith.....	1
Measles:	
Houston.....	14
Moonshine Hill.....	2
Malaria:	
Houston.....	1
Moonshine Hill.....	8
Mumps:	
Houston.....	5
Pneumonia:	
Houston.....	4
Scarlet fever:	
Houston.....	1
Smallpox:	
Houston.....	1
Syphilis:	
Goose Creek.....	1
Houston.....	12
Tuberculosis:	
Houston.....	2
Whooping cough:	
Houston.....	4

## CAMP MACARTHUR ZONE, TEX.

Waco:	
Chicken pox.....	1
German measles.....	1
Measles.....	2
Mumps.....	25
Pneumonia, lobar.....	1
Scarlet fever.....	1
Tuberculosis.....	1
Typhoid fever.....	1
Whooping cough.....	6

## CAMP M'CLELLAN ZONE, ALA.

Anniston:	
Chicken pox.....	2
Measles.....	1
Mumps.....	4
Pneumonia.....	1
Smallpox.....	8
Typhoid fever.....	1
Whooping cough.....	2
Blue Mountain:	
Smallpox.....	2
Precinct 15:	
Smallpox.....	1

## NORFOLK COUNTY NAVAL DISTRICT, VA.

Gonorrhea:	Cases.
Berkley.....	1
Malaria:	
Gilmerton.....	1
South Norfolk.....	2
Measles:	
Norfolk.....	14
Ocean View.....	3
Lenox.....	3
Berkley.....	1
South Norfolk.....	5
Portsmouth.....	13
Mumps:	
Gilmerton.....	2
South Norfolk.....	2
Portsmouth.....	1
Norfolk.....	2
Pellagra:	
Gilmerton.....	1
Pneumonia:	
South Norfolk.....	1
Scarlet fever:	
Norfolk.....	3
Willoughby.....	1
Portsmouth.....	1
Norfolk County.....	1
Smallpox:	
Norfolk.....	1
Tuberculosis:	
Portsmouth.....	3
West Norfolk.....	1
Brighton.....	1
Varicella:	
Pinnars Point.....	1
Port Norfolk.....	1

## FORT OGLETHORPE ZONE, GA.

Chattanooga:	
Cerebrospinal meningitis.....	2
Chicken pox.....	1
Diphtheria.....	2
Gonorrhea.....	26
Measles.....	1
Mumps.....	5
Pneumonia.....	2
Scarlet fever.....	1
Smallpox.....	4
Syphilis.....	7
Whooping cough.....	3
East Chattanooga:	
Mumps.....	3
East Lake:	
Scarlet fever.....	2

## CAMP PIKE ZONE, ARK.

Cerebrospinal meningitis:	
Little Rock.....	1
Chancroid:	
Little Rock.....	3
North Little Rock.....	3
Chicken pox:	
Little Rock.....	6
Diphtheria:	
Little Rock.....	3
Gonorrhea:	
Little Rock.....	10
North Little Rock.....	3
Scotts.....	2

## CAMP PIKE ZONE, ARK.—continued.

	Cases.
Malaria:	
Little Rock .....	3
Measles:	
Little Rock .....	2
Mumps:	
Little Rock .....	2
North Little Rock .....	2
Scotts .....	1
Pneumonia:	
Little Rock .....	5
Scarlet fever:	
Little Rock .....	4
North Little Rock .....	1
Septic sore throat:	
Scotts .....	1
Smallpox:	
Little Rock .....	10
North Little Rock .....	1
Syphilis:	
Little Rock .....	5
North Little Rock .....	3
Tuberculosis:	
Little Rock .....	1
Scotts .....	1
Kerr .....	1
Typhoid fever:	
Little Rock .....	1
Whooping cough:	
Little Rock .....	3

## CAMP SHELBY ZONE, MISS.

Hattiesburg:	
Hookworm .....	5
Malaria .....	8
Measles .....	1
Mumps .....	11
Pneumonia .....	7
Tuberculosis .....	5
Typhoid fever .....	2
Veneral .....	6
Whooping cough .....	6

## CAMP SHERIDAN ZONE, ALA.

Montgomery:	
Chancroid .....	4
Gonorrhea .....	29
Malaria .....	2
Measles .....	5
Mumps .....	5
Pneumonia, lobar .....	2
Ringworm .....	27
Syphilis .....	2
Tuberculosis .....	15
Rural district in 5-mile zone:	
Chicken pox .....	2
Measles .....	1
Mumps .....	1
Smallpox .....	1

## CAMP SHERMAN ZONE, OHIO.

Gonorrhea:	
Chillicothe .....	2

## CAMP SHERMAN ZONE, OHIO—continued.

	Cases.
Measles:	
Chillicothe .....	6
Liberty Township .....	6
Scioto Township .....	1
Mumps:	
Liberty Township .....	2
Scarlet fever:	
Chillicothe .....	4
Smallpox:	
Chillicothe .....	2
Tuberculosis, pulmonary:	
Chillicothe .....	1
Springfield Township .....	1

## CAMP ZACHARY TAYLOR ZONE, KY.

Jefferson County:	
Diphtheria .....	1
Measles .....	3
Trachoma .....	2
Tuberculosis, pulmonary .....	4
Tuberculosis, granular .....	1
Whooping cough .....	1
Louisville:	
Cerebrospinal meningitis .....	2
Chicken pox .....	2
Diphtheria .....	13
Malaria .....	1
Measles .....	7
Mumps .....	3
Pneumonia, lobar .....	6
Rabies in animals .....	3
Scarlet fever .....	1
Septic sore throat .....	1
Smallpox .....	1
Syphilis .....	1
Tuberculosis, pulmonary .....	30
Typhoid fever .....	2
Whooping cough .....	5
United States Government clinic:	
Chancroid .....	6
Gonorrhea .....	23
Syphilis .....	27

## TIDEWATER HEALTH DISTRICT, VA.

Hampton:	
Diphtheria .....	1
Tuberculosis .....	1
Typhoid fever .....	2
Newport News:	
Cerebrospinal meningitis .....	1
Chicken pox .....	2
German measles .....	1
Measles .....	12
Mumps .....	9
Pneumonia .....	1
Scarlatina .....	1
Scarlet fever .....	1
Tuberculosis .....	1
Typhoid fever .....	2
Whooping cough .....	1
Phoenix:	
Tuberculosis .....	1



## CAMP WADSWORTH ZONE, S. C.

Spartanburg:	Cases.
Chicken pox.....	1
Diphtheria.....	1
Gonorrhea.....	2
Measles.....	8
Mumps.....	5
Syphilis.....	2
Whooping cough.....	2
Pauline:	
German measles.....	1
Measles.....	2

## CAMP WHEELER ZONE, GA.

East Macon:	Cases.
Gonorrhea.....	1
Measles.....	1
Mumps.....	1
Macon:	
Diphtheria.....	1
Gonorrhea.....	1
Malaria.....	1
Mumps.....	1
Scarlet fever.....	2
Tuberculosis.....	1
Typhoid fever.....	2

## DISEASE CONDITIONS AMONG TROOPS IN THE UNITED STATES.

The following data are taken from telegraphic reports received in the office of the Surgeon General, United States Army, for the week ended April 19, 1918:

Annual admission rate per 1,000 (disease only):

All troops.....	1,745.5
National Guard camps.....	2,053.0
National Army camps.....	1,742.0
Regular Army.....	1,515.8

Noneffective rate per 1,000 on day of report:

All troops.....	49.1
National Guard camps.....	46.8

Noneffective rate per 1,000 on day of report—Continued.

National Army camps.....	54.2
Regular Army.....	43.6

Annual death rate per 1,000 (disease only):

All troops.....	12.9
National Guard camps.....	6.5
National Army camps.....	17.3
Regular Army.....	12.4

*New cases of special diseases reported during week ended Apr. 19, 1918.*

Camps.	Pneumonia.	Dysentery.	Malaria.	Veneral.	Measles.	Meningitis.	Scarlet fever.	Deaths.	Annual admission rate per 1,000 (disease only).	Noneffective per 1,000 on day of report.
Wadsworth.....	2			99	1	1		7	529.0	22.0
Hancock.....	2			32		1	1	1	653.5	25.2
McClellan.....	4			5	1				2,783.5	43.6
Sevier.....	16			25	21	1	9	4	732.8	27.0
Wheeler.....	24		3	12				8	4,818.5	85.1
Logan.....	14		2	73	11		9	2	3,393.4	51.7
Cody.....	19			2				5	450.6	26.2
Doniphan.....	23			7				4	2,646.2	68.4
Bowie.....	22		2	67				7	1,554.3	50.5
Sheridan.....	5			17	3		1	1	2,698.5	45.4
Shelby.....	8			17	3			6	4,536.7	87.4
Beauregard.....	15		18	27		1	2	2	2,083.3	65.4
Kearney.....	1		1	1			6	2	1,178.0	42.3
Devens.....	37			27	3			7	881.4	42.5
Upton.....	13			48	19		7	11	953.1	43.0
Dix.....	11			73	14	1	8	4	1,169.2	35.9
Meade.....	17			69	6		1	6	1,262.7	43.1
Lee.....	11	1	2	212	5		1	3	1,730.4	50.7
Jackson.....	14	1	6	15	17			3	1,950.0	67.4
Gordon.....	32			44	22	1	4	9	2,354.0	51.6
Sherman.....	29			58	1	1	20	16	1,560.0	46.7
Taylor.....	37			21	48	2		11	4,660.5	82.4
Custer.....	28			37	4		8	6	937.7	32.0
Grant.....	7			15	5		3	20	772.8	28.3
Pike.....	28			90	31	2	3	9	2,307.0	71.6
Dodge.....	75			63	19	3	44	29	1,898.6	107.0
Funston.....	41			20	15	2		9	1,163.8	66.4
Travis.....	27			37	18			13	3,394.9	62.0
Lewis.....	23		1	75	5		13	4	1,241.0	48.5
Northeastern Department.....				9	4	1	1	7	1,167.3	35.3
Eastern Department.....	9	1	1	14	15		1	6	978.5	33.0
Southeastern Department.....	11		4	37	13		1	4	1,600.2	58.5
Central Department.....	6			37	33	3	20	3	1,221.5	40.4
Southern Department.....	6		1	89	21	13		14	2,161.4	53.2
Western Department.....	8			53	15	1	2	2	1,367.1	29.2

*New cases of special diseases reported during week ended Apr. 19, 1918—Continued.*

Camps.	Pneumonia.	Dysentery.	Malaria.	Venereal.	Measles.	Meningitis.	Scarlet fever.	Deaths.	Annual admission rate per 1,000 (disease only).	Noneffective per 1,000 on day of report.
Aviation, S. C.	23	.....	2	91	56	5	28	25	1,566.8	40.7
Camp Greene	13	.....	.....	19	4	1	3	8	1,097.1	31.2
Camp Fremont	5	.....	1	17	19	.....	.....	1	2,112.5	55.0
El Paso	.....	1	.....	11	1	.....	.....	.....	1,528.0	7.0
Columbus Barracks	4	.....	.....	16	.....	.....	3	1	2,306.6	66.8
Jefferson Barracks	10	.....	.....	35	4	.....	16	1	2,977.0	123.5
Fort Logan	5	.....	1	1	.....	.....	3	1	2,500.8	105.3
Fort McDowell	1	.....	1	5	3	.....	.....	1	2,414.0	63.2
Fort Slocum	.....	.....	.....	10	1	.....	.....	2	1,319.7	39.1
Fort Thomas	2	.....	.....	6	4	.....	.....	1	1,730.7	63.5
D. B. Alcatraz	.....	.....	.....	.....	.....	.....	.....	.....	1,999.9	28.8
D. B. Fort Leavenworth	.....	.....	.....	2	.....	.....	.....	2	1,130.4	33.1
A. A. Humphreys	.....	.....	.....	.....	2	.....	.....	.....	859.5	3.4
J. E. Johnston	3	.....	1	43	10	.....	.....	2	1,452.9	39.4
Camp Merritt	39	.....	.....	121	6	.....	6	9	1,244.0	51.1
Camp Stuart	34	.....	.....	90	20	1	5	13	1,294.7	64.1
West Point, N. Y.	.....	.....	.....	.....	.....	.....	.....	.....	742.4	9.9
Edgewood-Aberdeen	.....	.....	.....	1	3	.....	.....	.....	825.8	32.6
Provisional Depot for Corps and Army Troops	15	.....	.....	6	7	1	.....	6	1,776.2	41.4
Camp Holabird	.....	.....	.....	1	.....	.....	1	.....	430.3	27.6
Camp Raritan	.....	.....	.....	1	1	.....	.....	.....	558.0	25.8
National Guard in departments	5	.....	.....	3	11	.....	1	5	.....	.....
National Army in departments	15	.....	.....	136	84	.....	31	14	.....	.....
Camp Colt	1	.....	.....	5	.....	.....	.....	1	3,447.0	50.5
Total	800	4	47	2,057	609	42	256	338	11,745.5	149.1

<sup>1</sup> All troops.*Annual rate per 1,000 for special diseases.*

Disease.	All troops in United States. <sup>1</sup>	Regulars, United States. <sup>1</sup>	National Guard, all camps. <sup>1</sup>	National Army, all camps. <sup>1</sup>	Expeditionary forces. <sup>2</sup>
Pneumonia	33.8	24.5	26.1	49.5	27.8
Dysentery	0.1	0.2	0.0	0.2	0.6
Malaria	1.9	1.5	4.1	1.0	0.4
Venereal	86.9	90.4	49.5	104.2	47.9
Paratyphoid	0.0	0.0	0.0	0.0	0.0
Typhoid	0.0	0.0	0.0	0.0	0.3
Measles	25.7	30.4	6.7	26.7	4.4
Meningitis	1.8	3.2	0.6	1.4	2.4
Scarlet fever	10.8	11.3	3.7	12.9	15.9

<sup>1</sup> Week ended Apr. 19, 1918.<sup>2</sup> Week ended Apr. 11, 1918.**CURRENT STATE SUMMARIES.****California.**

From the State Board of Health of California, by telegraph, for week ended April 27, 1918:

No marked changes in communicable disease prevalence. Slight increase in measles which is still epidemic throughout California. Seventeen cases smallpox; 5 Orange County, 5 San Francisco, others scattered. Six cases epidemic cerebrospinal meningitis for San Francisco, 1 Berkeley, 1 Orange County. Of 15 cases typhoid reported, 7 are in San Francisco.

## Reported by mail for preceding week (ended Apr. 20):

Cerebrospinal meningitis.....	7	Mumps.....	161
Chicken pox.....	135	Pellagra.....	1
Diphtheria.....	72	Pneumonia.....	86
Dysentery.....	5	Scarlet fever.....	58
Erysipelas.....	13	Smallpox.....	15
German measles.....	202	Syphilis.....	41
Gonococcus infection.....	97	Tetanus.....	1
Leprosy.....	1	Tuberculosis.....	138
Malaria.....	4	Typhoid fever.....	13
Measles.....	707	Whooping cough.....	181

**Connecticut.**

From Collaborating Epidemiologist Black, by telegraph, for week ended April 27, 1918:

Cerebrospinal meningitis: Ledyard 1, New Haven 1. Smallpox: Cheshire 2.

**Illinois.**

From Collaborating Epidemiologist Drake, by telegraph, for week ended April 27, 1918:

Smallpox: One hundred and nine, of which in Quincy 10, Elk Township (Jackson County) 10, Millcreek 10, Alton 5, Woodriver Township (Madison County) 5, Averyville 6, Peoria 8, East St. Louis 5, Carterville 5, Chicago 8. Scarlet fever: Eighty-six, of which in Keithsburg 6, Rock Falls 9, Chicago 35. Diphtheria: One hundred and fifty, of which in Chicago 105. Meningitis: Chicago 11. Poliomyelitis: Waukegan 1. One case of poliomyelitis reported last week proved meningitis.

**Indiana.**

From the State Board of Health of Indiana, by telegraph, for week ended April 27, 1918:

Scarlet fever: Epidemic Bloomfield Township (Allen County). Whooping cough: Epidemic Franklin. Smallpox: Epidemic Nappanee, Greensburg, Anderson. Measles: Epidemic Anderson.

**Kansas.**

From Collaborating Epidemiologist Crumbine, by telegraph, for week ended April 27, 1918:

Meningitis: Great Bend, 1. Poliomyelitis: Hutchinson, 1. Smallpox (over 10 cases): In counties—Butler 17, Crawford 24, Pawnee 16; in cities—Fort Scott 11, Kansas City 16, Wichita 18. Scarlet fever (over 10 cases): Topeka 16.

**Louisiana.**

From Collaborating Epidemiologist Dowling, by telegraph, for week ended April 27, 1918:

Meningitis, excluding Rapides Parish: Orleans Parish 1, Webster 1, Winn 1. Diphtheria 12. Malaria 33. Measles 25. Pneumonia 10. Smallpox 19. Typhoid fever 21.

**Massachusetts.**

From Collaborating Epidemiologist Hitchcock, by telegraph, for week ended April 27, 1918:

Unusual prevalence. German measles: Gardner 22, Mansfield 56. Measles: Chelsea 42, Brookline 45, Chelmsford 60, Quincy 24, Shirley 11, Westford 10. Scarlet fever: Holliston 97, Brewster 5, Adams 8. (April 14: Smallpox; Chelsea 1.)

**Minnesota.**

From Collaborating Epidemiologist Bracken, by telegraph, for week ended April 27, 1918:

Smallpox (new focus): Beltrami County, Kelliher Township 1. Three cerebrospinal meningitis reported since April 22.

**New Jersey.**

From Collaborating Epidemiologist Bowen, by telegraph, for week ended April 27, 1918:

Unusual prevalence measles Hackensack, Haddonfield, Bridgeton, Montclair, Orange, Pitman, Newton.

**Ohio.**

From Collaborating Epidemiologist Freeman, by telegraph, for week ended April 27, 1918:

Meningitis: Seven cases scattered throughout State. Poliomyelitis: Two cases. Smallpox decreasing.

**South Carolina.**

From Collaborating Epidemiologist Hayne, by telegraph, for week ended April 29, 1918:

Four cases epidemic meningitis.

**Virginia.**

From Collaborating Epidemiologist Traynham, by telegraph, for week ended April 27, 1918:

One case smallpox Henrico County, 1 Smyth, 2 Amherst, 8 Spottsylvania. One case cerebrospinal meningitis Newport News, 1 Salem. One case poliomyelitis Amelia County.

**Washington.**

From Collaborating Epidemiologist Tuttle, by telegraph, for week ended April 27, 1918:

Communicable disease situation unchanged.

## RECIPROCAL NOTIFICATION.

## Minnesota.

*Cases of communicable diseases referred during March, 1918, to other State health departments by Department of Health of the State of Minnesota.*

Disease and locality of notification.	Referred to health authority of—	Why referred.
Scarlet fever: Minneapolis health department, Hennepin County.	Grand Rapids, Kent County, Mich. (2 cases).	Man and wife exposed to scarlet fever in Michigan developed disease in Minnesota. Husband died.
Smallpox: Minneapolis health department, Hennepin County.	Cresco, Howard County, Iowa; Owatonna, Steele County, Minn.; Excelsior, Hennepin County, Minn. Cedar Rapids, Linn County, Iowa. Fargo, Cass County, N. Dak. Toronto, Deuel County, S. Dak. Superior, Douglas County, Wis.	Quarantined at Minneapolis; traveled in Iowa and two Minnesota towns while in infectious stage. Salesman quarantined in Minneapolis traveled in Iowa while in infectious stage. Quarantined in Minneapolis; developed first symptoms before leaving North Dakota. Exposed to smallpox Mar. 14 in Minnesota through consulting chiropractor, who developed first symptoms Mar. 8. Salesman, quarantined in Minneapolis. Traveled in Wisconsin while in infectious stage.
Tuberculosis: Mayo Clinic, Rochester, Olmsted County.	Rochelle, Ogle County, Ill. Oak Park, Cook County, Ill. Rock Falls, Whiteside County, Ill. Chicago, Cook County, Ill. Freeport, Stephenson County, Ill. Ligonier, Nobles County, Ind. Sioux City, Woodbury County, Iowa. Schaller, Sac County, Iowa. Buxton, Monroe County, Iowa. Rake, Winnebago County, Iowa. Hantontown, Worth County, Iowa. Glen Elder, Mitchell County, Kans. Stambaugh, Iron County, Mich. Gladstone, Delta County, Mich. Iron River, Iron County, Mich. Maryville, route No. 3, Nodaway County, Mo. Conception, Nodaway County, Mo. Livingston, Park County, Mont. Birney, Rosebud County, Mont. Outlook, Sheridan County, Mont. Geyser, Cascade County, Mont. Surrey, Ward County, N. Dak. Devils Lake, Ramsey County, N. Dak. Lawton, Ramsey County, N. Dak. Carrington, Foster County, N. Dak. Edmore, Ramsey County, N. Dak. (4 cases) Mohall, Renville County, N. Dak. Ashland, Saunders County, Nebr. Shawnee, Pottawatomie County, Okla. Gettysburg, Adams County, Pa. Brandon, Minnehaha County, S. Dak. Roslyn, Day County, S. Dak. (2 cases) Orleans, Paulk County, S. Dak. McLaughlin, Corson County, S. Dak. Sioux Falls, Minnehaha County, S. Dak. Merrill, Lincoln County, Wis. Hamburg, Marathon County, Wis. Cecil, Shawano County, Wis. Neilsville, Clark County, Wis. Pine River, Waushara County, Wis. Neepawa, Manitoba, Canada. Winnipeg, Manitoba, Canada. Lanigan, Saskatchewan, Canada. Darmody, Saskatchewan, Canada. Bismarck, Burleigh County, N. Dak. Stevens Point, Portage County, Wis.	4 incipient, 1 apparently arrested, 2 apparently cured, 4 (stage of disease not given) 5 advanced, and 14 moderately advanced cases left Mayo Clinic for homes.
Pokegama Sanatorium, Pine County. Thomas Hospital, Minneapolis, Hennepin County.	Seattle, King County, Wash. Bruce, Brookings County, S. Dak.	1 (stage of disease not given), 7 advanced, 7 moderately advanced, 3 apparently arrested cases left Mayo Clinic for homes. 2 incipient cases left Pokegama Sanatorium for homes. Open case left sanatorium for home. Deceased case removed from Thomas Hospital to home.

## CEREBROSPINAL MENINGITIS.

## State Reports for March, 1918.

Place.	New cases reported.	Place.	New cases reported.
<b>Connecticut:</b>		<b>Kansas—Continued.</b>	
Fairfield County—		Brown County—	
Bridgeport.....	1	Horton.....	1
Fairfield.....	1	Butler County—	
Greenwich.....	1	Augusta.....	2
Hartford County—		Eldorado.....	2
Hartford.....	2	Towanda.....	3
New Haven County—		Cherokee County—	
Ansonia.....	1	Carona.....	1
Naugatuck.....	1	Comanche County—	
Wallingford.....	1	Coldwater.....	1
Waterbury.....	1	Cowley County—	
New Haven.....	1	Arkansas City.....	1
New London County—		Crawford County—	
New London.....	1	Cherokee.....	1
Litchfield County—		Greenwood County—	
New Milford.....	1	Madison.....	1
Total.....	12	Jackson County—	
<b>Illinois:</b>		Whiting.....	1
Adams County—		Johnson County—	
Quincy.....	1	De Soto.....	1
Bond County—		Kearny County—	
Greenville.....	1	Lakin.....	1
Cook County—		Labette County—	
Chicago.....	29	Edna.....	1
Dekalb County—		Parsons.....	3
Sandwich.....	1	Leavenworth County—	
Dewitt County—		Leavenworth.....	2
Rutledge Township.....	1	Miami County—	
Franklin County—		Osawatimie.....	1
Thompsonville.....	1	Montgomery County—	
Henry County—		Coffeyville.....	4
Alpha.....	1	Nemaha County—	
Oxford Township.....	1	Sabetha.....	1
Kane County—		Neosho County—	
St. Charles Township.....	1	Chanute.....	1
Lake County—		Riley County—	
Lake Forest.....	1	Manhattan.....	1
Waukegan.....	1	Sedgewick County—	
Macoupin County—		Wichita.....	3
Gillespie.....	1	Sumner County—	
Virdeu.....	2	Corbin.....	7
Madison County—		Wyandotte County—	
Venice.....	1	Kansas City.....	12
McLean County—		Total.....	56
Saybrook.....	1	<b>Minnesota:</b>	
Pike County—		Blue Earth County—	
Pleasantvale Township.....	1	Mankato.....	2
Saline County—		Freeborn County—	
Galatia.....	1	Albert Lea.....	1
Sangamon County—		Albert Lea Township.....	1
Springfield.....	3	Hennepin County—	
St. Clair County—		Minneapolis.....	1
East St. Louis.....	1	Ottertail County—	
Vermilion County—		Deer Creek.....	1
Georgetown Township.....	1	Pope County—	
Westville.....	1	Glenwood.....	1
Warren County—		Ramsey County—	
Roseville Township.....	1	St. Paul.....	1
Point Pleasant Township.....	1	St. Louis County—	
Will County—		Eveleth.....	1
Wilmington.....	1	Total.....	9
Winneshago County—		<b>Mississippi:</b>	
Rockford.....	3	Bolivar County.....	8
Camp Grant.....	1	Carroll County.....	1
Total.....	59	Coahoma County.....	3
<b>Iowa:</b>		Harrison County.....	1
Polk County.....	5	Jones County.....	1
Scott County.....	4	Pearl River County.....	1
Total.....	9	Tallahatchie County.....	1
<b>Kansas:</b>		Tate County.....	1
Barton County—		Warren County.....	1
Hoisington.....	2	Washington County.....	7
Bourbon County—		Total.....	25
Hollister.....	1		
Redfield.....	1		



## CEREBROSPINAL MENINGITIS—Continued.

## State Reports for March, 1918—Continued.

Place.	New cases reported.	Place.	New cases reported.
Nebraska:		Pennsylvania—Continued.	
Dodge County.....	1	Fayette County.....	1
Douglas County.....	3	Lackawanna County.....	2
Hall County.....	2	Luzerne County.....	9
Merrick County.....	1	Montgomery County.....	1
Total.....	7	Northampton County.....	1
New Jersey:		Philadelphia County.....	20
Atlantic County.....	1	Schuylkill County.....	1
Bergen County.....	1	Washington County.....	1
Burlington County.....	5	Westmoreland County.....	4
Camden County.....	3	York County.....	1
Cape May County.....	1	Total.....	79
Essex County.....	15	South Carolina:	
Hudson County.....	5	Aiken County.....	2
Mercer County.....	2	Barnwell County.....	1
Passaic County.....	4	Charleston County.....	12
Union County.....	4	Chester County.....	1
Total.....	41	Darlington County.....	3
North Carolina:		Fairfield County.....	1
Avery County.....	1	Florence County.....	1
Bladen County.....	1	Greenville County.....	26
Cabarrus County.....	1	Horry County.....	2
Catawba County.....	1	Laurens County.....	1
Cherokee County.....	1	Lee County.....	1
Cleveland County.....	1	Newberry County.....	4
Cumberland County.....	1	Orangeburg County.....	1
Currituck County.....	1	Richland County.....	12
Forsyth County.....	2	Saluda County.....	1
Gaston County.....	2	Spartanburg County.....	6
Graham County.....	2	Sumter County.....	1
Hyde County.....	2	York County.....	6
Martin County.....	1	Total.....	82
Montgomery County.....	1	South Dakota:	
Pasquotank County.....	1	Codington County.....	2
Pitt County.....	2	Lake County.....	1
Total.....	21	Total.....	3
Pennsylvania:		Wisconsin:	
Allegheny County.....	19	Calumet County.....	1
Armstrong County.....	1	Dane County.....	2
Cambria County.....	2	La Crosse County.....	1
Cameron County.....	1	Manitowoc County.....	1
Chester County.....	1	Milwaukee County.....	14
Clarion County.....	5	Rock County.....	1
Clearfield County.....	1	Sheboygan County.....	4
Dauphin County.....	1	Waupaca County.....	1
Delaware County.....	2	Total.....	25
Elk County.....	5		

## City Reports for Week Ended Apr. 13, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio.....	2	.....	Fall River, Mass.....	2	.....
Atlanta, Ga.....	2	.....	Flint, Mich.....	.....	1
Baltimore, Md.....	4	4	Indianapolis, Ind.....	2	.....
Birmingham, Ala.....	1	.....	Jacksonville, Fla.....	.....	1
Boston, Mass.....	7	3	Jamestown, N. Y.....	.....	.....
Bridgeport, Conn.....	1	1	Jersey City, N. J.....	1	5
Buffalo, N. Y.....	1	1	Little Rock, Ark.....	1	.....
Chattanooga, Tenn.....	6	4	Los Angeles, Cal.....	2	.....
Chicago, Ill.....	8	2	Louisville, Ky.....	2	2
Cincinnati, Ohio.....	1	1	Macon, Ga.....	1	1
Cleveland, Ohio.....	2	1	Memphis, Tenn.....	1	.....
Covington, Ky.....	.....	1	Milwaukee, Wis.....	4	4
Dayton, Ohio.....	.....	4	Nashville, Tenn.....	1	.....
Detroit, Mich.....	6	1	Newark, N. J.....	5	.....
Duluth, Minn.....	1	.....	Newcastle, Ind.....	1	1
Evansville, Ind.....	.....	1	New York, N. Y.....	22	5

## CEREBROSPINAL MENINGITIS—Continued.

## City Reports for Week Ended Apr. 13, 1918—Continued.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Niagara Falls, N. Y.	1	.....	Salt Lake City, Utah	.....	1
Norfolk, Va.	2	2	San Diego, Cal.	1	.....
North Little Rock, Ark.	1	.....	San Francisco, Cal.	4	2
Passaic, N. J.	1	1	Scranton, Pa.	1	.....
Philadelphia, Pa.	6	3	Seattle, Wash.	1	.....
Pittsburgh, Pa.	6	.....	Syracuse, N. Y.	1	.....
Pittsfield, Mass.	1	.....	Tacoma, Wash.	1	.....
Portsmouth, Va.	1	.....	Troy, N. Y.	1	.....
Poughkeepsie, N. Y.	.....	1	Washington, D. C.	1	1
Providence, R. I.	2	.....	Wilkes-Barre, Pa.	3	.....
Rockford, Ill.	1	.....	Winston-Salem, N. C.	1	.....
St. Louis, Mo.	4	.....	Worcester, Mass.	5	3

## DIPHTHERIA.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 702.

## ERYSIPELAS.

## City Reports for Week Ended Apr. 13, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Baltimore, Md.	3	1	Malden, Mass.	.....	1
Beloit, Wis.	2	.....	Marshall, Tex.	1	.....
Boston, Mass.	.....	1	Medford, Mass.	.....	1
Bridgeport, Conn.	1	.....	Milwaukee, Wis.	1	.....
Brockton, Mass.	2	.....	Newark, N. J.	9	.....
Buffalo, N. Y.	4	2	New York, N. Y.	.....	11
Chicago, Ill.	18	2	Omaha, Nebr.	4	1
Cincinnati, Ohio.	1	1	Passaic, N. J.	1	.....
Cleveland, Ohio.	6	1	Philadelphia, Pa.	9	.....
Denver, Colo.	7	.....	Pittsburgh, Pa.	12	2
Detroit, Mich.	1	1	Portland, Oreg.	3	.....
Easton, Pa.	1	.....	Providence, R. I.	.....	1
Erie, Pa.	2	2	Provo, Utah	1	.....
Jackson, Mich.	2	.....	St. Louis, Mo.	16	.....
Johnstown, Pa.	.....	1	St. Paul, Minn.	3	.....
Joplin, Mo.	1	6	San Francisco, Cal.	4	.....
Kansas City, Kans.	2	.....	Seattle, Wash.	2	.....
Los Angeles, Cal.	4	.....	Wichita, Kans.	1	.....
Louisville, Ky.	3	.....	York, Pa.	1	.....

## LEPROSY.

## City Reports for Week Ended Apr. 13, 1918.

During the week ended April 13, 1918, two cases of leprosy were reported; one case at Los Angeles, Cal., and one case at Riverside, Cal.

## MALARIA.

## State Reports for March, 1918.

Place.	New cases reported.	Place.	New cases reported.
<b>Illinois:</b>		<b>Mississippi—Continued.</b>	
Bureau County—		Jasper County.....	104
Mineral.....	1	Jefferson County.....	101
Coles County—		Jefferson Davis County.....	26
Seven Hickory Township.....	1	Jones County.....	62
Crawford County—		Kemper County.....	35
Robinson.....	4	Lafayette County.....	36
Franklin County—		Lamar County.....	55
Macedonia.....	6	Lauderdale County.....	35
Grundy County—		Lawrence County.....	64
Saratoga Township.....	3	Leake County.....	87
Jackson County—		Lee County.....	110
Elkville.....	15	Leflore County.....	133
Jasper County—		Lincoln County.....	33
Newton.....	3	Lowndes County.....	29
Knox County—		Madison County.....	11
Walnut Grove Township.....	4	Madison County.....	108
Livingston County—		Marion County.....	47
Long Point.....	1	Marshall County.....	37
Pike County—		Monroe County.....	41
Kinderhook.....	3	Montgomery County.....	50
Pope County—		Neshoba County.....	22
Goleconda.....	6	Newton County.....	12
Pulaski County—		Noxubee County.....	41
Ullin.....	2	Oktibbeha County.....	100
Putnam County—		Panola County.....	75
Hennepin.....	1	Pearl River County.....	81
Randolph County—		Perry County.....	67
Coulterville.....	2	Pike County.....	74
Red Bud.....	1	Pontotoc County.....	39
Sangamon County—		Pontotoc County.....	149
Talkington Township.....	1	Quitman County.....	53
Union County—		Rankin County.....	46
Jonesboro.....	2	Scott County.....	49
Williamson County—		Sharkey County.....	71
Cambria.....	4	Simpson County.....	36
Total.....	60	Smith County.....	24
<b>Kansas:</b>		Stone County.....	234
Chautauqua County:		Sundowner County.....	173
Sedan.....	1	Tallahatchie County.....	138
<b>Mississippi:</b>		Tate County.....	41
Adams County.....	18	Tippah County.....	32
Alcorn County.....	28	Tishomingo County.....	145
Amite County.....	74	Tunica County.....	45
Attala County.....	64	Union County.....	14
Benton County.....	14	Walsh County.....	211
Bolivar County.....	532	Washington County.....	170
Calhoun County.....	50	Wayne County.....	25
Carroll County.....	44	Webster County.....	26
Chickasaw County.....	31	Wilkinson County.....	9
Choctaw County.....	51	Winston County.....	13
Chalborne County.....	51	Yalobusha County.....	29
Clarke County.....	31	Yazoo County.....	262
Clay County.....	34	Total.....	6,084
Coahoma County.....	391	<b>New Jersey:</b>	
Copiah County.....	56	Bergen County.....	1
Covington County.....	83	Burlington County.....	3
De Soto County.....	27	Essex County.....	3
Forrest County.....	22	Hudson County.....	1
Franklin County.....	45	Total.....	8
George County.....	13	<b>Pennsylvania:</b>	
Greene County.....	25	Huntingdon County.....	1
Grenada County.....	24	<b>South Carolina:</b>	
Hancock County.....	31	Barnwell County.....	1
Harrison County.....	73	Marion County.....	2
Hinds County.....	166	Total.....	3
Holmes County.....	203		
Issaquena County.....	37		
Itawamba County.....	25		
Jackson County.....	39		

## MALARIA—Continued.

## City Reports for Week Ended Apr. 13, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alexandria, La.....	1	.....	Jacksonville, Fla.....	1	.....
Atlanta, Ga.....	1	.....	Joplin, Mo.....	4	.....
Augusta, Ga.....	5	.....	Little Rock, Ark.....	4	.....
Birmingham, Ala.....	2	1	Newton, Mass.....	1	.....
Charleston, S. C.....	.....	1	Palestine, Tex.....	4	.....
Fort Smith, Ark.....	1	.....	Rahway, N. J.....	1	.....
Hattiesburg, Miss.....	6	.....			

## MEASLES.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 702.

## PELLAGRA.

## State Reports for March, 1918.

Place.	New cases reported.	Place.	New cases reported.
Connecticut:		Mississippi—Continued.	
Hartford County—		Lee County.....	21
Hartford.....	1	Leflore County.....	7
Illinois:		Lincoln County.....	12
Sangamon County—		Lowndes County.....	9
Tallington Township.....	1	Madison County.....	1
Jacksonville State Hospital.....	1	Marion County.....	9
Total.....	2	Marshall County.....	12
Kansas:		Montgomery County.....	5
Reno County—		Neshoba County.....	10
Hutchinson.....	1	Newton County.....	1
Mississippi:		Noxubee County.....	3
Adams County.....	2	Oktibbeha County.....	2
Alcorn County.....	4	Panola County.....	6
Amite County.....	2	Pearl River County.....	3
Benton County.....	1	Perry County.....	6
Bollivar County.....	48	Pike County.....	6
Calhoun County.....	4	Pontotoc County.....	7
Carroll County.....	2	Prentiss County.....	2
Chickasaw County.....	15	Quitman County.....	8
Claiborne County.....	1	Rankin County.....	5
Clarke County.....	3	Scott County.....	6
Clay County.....	7	Simpson County.....	2
Coahoma County.....	43	Stone County.....	7
Copolah County.....	17	Sunflower County.....	12
Covington County.....	7	Tallahatchie County.....	27
De Soto County.....	8	Tate County.....	13
Forrest County.....	5	Tippah County.....	3
George County.....	5	Tishomingo County.....	8
Grenada County.....	1	Tunica County.....	14
Hinds County.....	39	Union County.....	7
Holmes County.....	2	Walthall County.....	4
Issaquena County.....	1	Warren County.....	2
Itawamba County.....	6	Washington County.....	23
Jackson County.....	1	Wayne County.....	2
Jefferson County.....	1	Webster County.....	4
Jefferson Davis County.....	5	Wilkinson County.....	1
Jones County.....	4	Winston County.....	3
Kemper County.....	3	Yalobusha County.....	2
Lafayette County.....	3	Yazoo County.....	30
Lamar County.....	1	Total.....	556
Lauderdale County.....	3	South Carolina:	
Lawrence County.....	4	Greenville County.....	1
Leake County.....	3	Spartanburg County.....	5
		Total.....	6

## PELLAGRA—Continued.

## City Reports for Week Ended Apr. 13, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alexandria, La.....	1	.....	Mobile, Ala.....	1	1
Atlanta, Ga.....	.....	1	Montgomery, Ala.....	.....	2
Birmingham, Ala.....	.....	2	Nashville, Tenn.....	2	.....
Charleston, S. C.....	.....	1	New Orleans, La.....	1	1
Dallas, Tex.....	.....	2	Northampton, Mass.....	1	.....
Fort Worth, Tex.....	1	1	Palestine, Tex.....	1	.....
Jacksonville, Fla.....	1	.....	Passaic, N. J.....	.....	7
Los Angeles, Cal.....	1	1	Savannah, Ga.....	.....	1
Marshall, Tex.....	3	.....	Schenectady, N. Y.....	.....	1
Memphis, Tenn.....	2	.....	Winston-Salem, N. C.....	1	.....

## PNEUMONIA.

## City Reports for Week Ended Apr. 13, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alexandria, La.....	1	.....	Little Rock, Ark.....	13	.....
Ann Arbor, Mich.....	2	1	Lorain, Ohio.....	2	.....
Anniston, Ala.....	2	.....	Los Angeles, Cal.....	10	10
Atlanta, Ga.....	5	24	Lowell, Mass.....	9	6
Baltimore, Md.....	76	36	Lynn, Mass.....	9	2
Barre, Vt.....	1	1	Macon, Ga.....	2	5
Battle Creek, Mich.....	1	.....	Manchester, N. H.....	4	1
Berkeley, Cal.....	2	2	Marshall, Tex.....	3	.....
Binghamton, N. Y.....	8	.....	McKeesport, Pa.....	3	8
Boston, Mass.....	25	30	Michigan City, Ind.....	5	5
Braddock, Pa.....	14	.....	Montgomery, Ala.....	4	.....
Bridgeport, Conn.....	6	19	Newark, N. J.....	122	21
Brockton, Mass.....	4	3	New Bedford, Mass.....	7	3
Buffalo, N. Y.....	12	31	Newburyport, Mass.....	2	1
Cambridge, Mass.....	10	6	New Castle, Pa.....	7	.....
Chattanooga, Tenn.....	1	3	Newport, Ky.....	1	1
Chelsea, Mass.....	15	1	Newton, Mass.....	2	.....
Chicago, Ill.....	369	193	North Little Rock, Ark.....	1	1
Chicopee, Mass.....	1	1	Oshkosh, Wis.....	2	1
Cleveland, Ohio.....	53	60	Palestine, Tex.....	2	.....
Clinton, Mass.....	1	1	Pasadena, Cal.....	1	.....
Coffeyville, Kans.....	1	.....	Philadelphia, Pa.....	165	91
Dayton, Ohio.....	2	2	Pittsburgh, Pa.....	151	122
Detroit, Mich.....	69	98	Pittsfield, Mass.....	4	3
Duluth, Minn.....	19	13	Pontiac, Mich.....	9	3
Elmira, N. Y.....	8	3	Providence, R. I.....	1	22
Erie, Pa.....	17	10	Provo, Utah.....	2	.....
Fall River, Mass.....	14	2	Quincy, Mass.....	2	.....
Fargo, N. Dak.....	1	1	Reading, Pa.....	7	8
Fitchburg, Mass.....	5	2	Redlands, Cal.....	1	.....
Flint, Mich.....	3	5	Rochester, N. Y.....	29	17
Fort Worth, Tex.....	9	9	Sacramento, Cal.....	2	2
Grand Rapids, Mich.....	6	1	St. Paul, Minn.....	2	16
Hammond, Ind.....	2	5	Salem, Mass.....	3	2
Harrisburg, Pa.....	2	4	Sandusky, Ohio.....	2	1
Harrison, N. J.....	1	.....	San Francisco, Cal.....	26	17
Hattiesburg, Miss.....	1	.....	San Jose, Cal.....	1	.....
Haverhill, Mass.....	7	.....	Saratoga Springs, N. Y.....	1	1
Holyoke, Mass.....	7	.....	Schenectady, N. Y.....	13	6
Jackson, Mich.....	5	5	Somerville, Mass.....	4	1
Jacksonville, Fla.....	5	1	Springfield, Mass.....	13	6
Jamestown, N. Y.....	1	2	Springfield, Ohio.....	3	5
Janesville, Wis.....	2	2	Steelton, Pa.....	1	.....
Johnstown, Pa.....	5	8	Steubenville, Ohio.....	2	.....
Joplin, Mo.....	2	.....	Toledo, Ohio.....	3	19
Kalamazoo, Mich.....	7	1	Waco, Tex.....	4	.....
Kansas City, Kans.....	13	.....	Waltham, Mass.....	1	.....
Lancaster, Pa.....	1	.....	Wichita, Kans.....	4	1
Lawrence, Mass.....	6	3	Worcester, Mass.....	32	16
Lincoln, Nebr.....	7	1	York, Pa.....	4	.....

## POLIOMYELITIS (INFANTILE PARALYSIS).

## State Reports for March, 1918.

Place.	New cases reported.	Place.	New cases reported.
Connecticut:		Michigan—Continued.	
Hartford County—		Wayne County—	1
Hartford.....	1	Highland Park.....	1
Illinois:		Wexford County—	1
Christian County—		Cadillac.....	1
Assumption Township.....	1	Total.....	5
Taylorville.....	1	Minnesota:	
Cook County—		Olmsted County—	
Chicago.....	8	Rochester.....	1
Cicero.....	1	Mississippi:	
Oak Park.....	1	Adams County.....	1
Du Page County—		Bolivar County.....	1
Wheaton.....	1	Rankin County.....	1
Henry County—		Tate County.....	2
Lynn Township.....	1	Total.....	5
Moultrie County—		Nebraska:	
Lowington.....	1	Colfax County.....	1
Sangamon County—		York County.....	1
Springfield.....	1	Total.....	2
Talkington Township.....	1	New Jersey:	
Tazewell County—		Essex County.....	5
Mackinaw.....	1	North Carolina:	
Williamson County—		Chowan County.....	1
Herrin.....	1	Franklin County.....	1
Total.....	19	Total.....	2
Iowa:		North Dakota:	
Crawford County.....	1	Walsh County.....	1
Dickinson County.....	1	Pennsylvania:	
Hamilton County.....	1	Allegheny County.....	4
Mills County.....	1	Berks County.....	1
Total.....	4	Fayette County.....	1
Kansas:		Lancaster County.....	2
Brown County—		Mercer County.....	2
Hamlin.....	1	Union County.....	1
Harper County—		Total.....	11
Anthony.....	1	Wisconsin:	
Harvey County—		Bayfield County.....	1
Newton.....	1	Milwaukee County.....	46
Reno County—		Racine County.....	2
Hutchinson.....	1	Rock County.....	1
Total.....	4	Total.....	50
Michigan:			
Lenawee County—			
Clayton.....	1		
Kent County—			
Grand Rapids.....	1		
Van Buren County—			
Keeler Township.....	1		

## City Reports for Week Ended Apr. 13, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Chicago, Ill.....	3	2	Milwaukee, Wis.....	7	2
Columbus, Ohio.....	5	3	New Castle, Pa.....	1	1
Jersey City, N. J.....	1	1	New York, N. Y.....	4	1
Los Angeles, Cal.....	1	1	Pittsburgh, Pa.....	1	1
Lowell, Mass.....	1	1	St. Joseph, Mo.....	1	1
Medford, Mass.....	1	1	San Francisco, Cal.....	1	1



## RABIES IN ANIMALS.

## City Reports for Week Ended Apr. 13, 1918.

During the week ended April 13, 1918, one case of rabies in animals was reported at Atlantic City, N. J., one case at Louisville, Ky., one case at Reno, Nev., and one case at Winston-Salem, N. C.

## ROCKY MOUNTAIN SPOTTED FEVER.

## Montana—Missoula County.

On April 29, 1918, one case of Rocky Mountain spotted fever was reported from O'Brien Creek, Missoula County, Mont.

## SCARLET FEVER.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 702.

## SMALLPOX.

## State Reports for March, 1918.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
<b>Kansas:</b>						
Allen County—						
Carlyle.....	5				5	
Concreto.....	1				1	
Gas.....	2				2	
Humboldt.....	2				2	
Iola.....	47		1	1	45	
Moran.....	2				2	
Anderson County—						
Colony.....	2				2	
Atchison County—						
Atchison.....	6			2	4	
Huron.....	16				16	
Lancaster.....	2				2	
Muscotah.....	5				5	
Nortonville.....	1				1	
Barber County—						
Klowa.....	1				1	
Barton County—						
Ellinwood.....	1				1	
Great Bend.....	6			1	5	
Heizer.....	1				1	
Pawnee Rock.....	2				2	
Bourbon County—						
Fort Scott.....	10			1	9	
Fulton.....	2				2	
Garland.....	15				15	
Hammond.....	5				5	
Uniontown.....	1				1	
Brown County—						
Everest.....	4				4	
Hlawatba.....	14			1	13	
Horton.....	1				1	
Morrill.....	4				4	
Netawaka.....	1				1	
Butler County—						
Atlanta.....	1				1	
Augusta.....	6				6	
Douglass.....	6				6	
Eldorado.....	59				51	8
Oil Hill.....	1				1	
Whitewater.....	1				1	

## SMALLPOX—Continued.

## State Reports for March, 1918—Continued.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
Kansas—Continued.						
Chautauqua County—						
Longton.....	1				1	
Sedan.....	3				3	
Cherokee County—						
Baxter Springs.....	2				2	
Columbus.....	2				2	
Galena.....	25				25	
Melrose.....	1				1	
Scammon.....	17				17	
Weir.....	6				6	
West Mineral.....	7				7	
Cheyenne County—						
St. Francis.....	3				3	
Jaqua.....	1				1	
Clark County—						
Minneola.....	8				8	
Clay County—						
Clay Center.....	2				2	
Cloud County—						
Aurora.....	3				3	
Clyde.....	1				1	
Concordia.....	1				1	
Coffey County—						
Burlington.....	8				8	
Halls Summit.....	1				1	
Leroy.....	2				2	
Waverly.....	1				1	
Comanche County—						
Protection.....	9				9	
Cowley County—						
Arkansas City.....	18				18	
Atlanta.....	4				4	
Cambridge.....	2				2	
Udall.....	2				2	
Winfield.....	4			1	3	
Crawford County—						
Arma.....	4				4	
Breezy Hill.....	1				1	
Cherokee.....	2				2	
Englevale.....	5				5	
Farlington.....	2				2	
Franklin.....	1				1	
Frontenac.....	9				9	
Girard.....	13				13	
McCune.....	3			1	2	
Mulberry.....	2				2	
Pittsburg.....	25				20	5
Radley.....	7				7	
Decatur County—						
Jennings.....	1				1	
Oberlin.....	2				2	
Dickinson County—						
Barrett.....	1				1	
Elmo.....	1				1	
Herington.....	9				9	
Hope.....	2				2	
Navarre.....	1				1	
Doniphan County—						
Huron.....	1				1	
Severance.....	5				5	
Troy.....	6				6	
Wathena.....	1				1	
White Cloud.....	1				1	
Douglas County—						
Eudora.....	1				1	
Lawrence.....	3				3	
Edwards County—						
Fellsburg.....	1				1	
Kinsley.....	3			1	2	
Ellis County—						
Grainola.....	1				1	
Howard.....	20			1	29	

## SMALLPOX—Continued.

## State Reports for March, 1918—Continued.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
Kansas—Continued.						
Ellsworth County—						
Kanopolis.....	1				1	
Wilson.....	1				1	
Finney County—						
Holcomb.....	1				1	
Ford County—						
Dodge City.....	2				2	
Franklin County—						
Ottawa.....	12				12	
Gove County—						
Utica.....	4				4	
Graham County—						
Edmond.....	1				1	
Hill City.....	85				85	
Lenora.....	5				5	
Morland.....	7				7	
Paleo.....	1				1	
Studley.....	1				1	
Gray County—						
Cimarron.....	7				7	
Ft. Sign.....	1				1	
Greenwood County—						
Climax.....	1				1	
Eureka.....	11				11	
Reece.....	1				1	
Toronto.....	2				2	
Harper County—						
Anthony.....	2				2	
Danville.....	3				3	
Harper.....	6				6	
Harvey County—						
Newton.....	11				11	
Valley Center.....	1				1	
Walton.....	1				1	
Jackson County—						
Holton.....	2				2	
Hoyt.....	4				4	
Stright Creek.....	12				12	
Jefferson County—						
Boyle.....	1				1	
Dunavant.....	2				2	
McLouth.....	3				3	
Oskaloosa.....	1				1	
Perry.....	1				1	
Valley Falls.....	1				1	
Williamstown.....	1				1	
Jewell County—						
Reubens.....	3				3	
Webber.....	5				5	
Johnson County—						
Lenexa.....	1				1	
Merriam.....	1				1	
Overland Park.....	1				1	
South Park.....	1				1	
Zarah.....	1				1	
Kingman County—						
Cheney.....	4				4	
Nashville.....	1				1	
Pretty Prairie.....	10				10	
Kiowa County—						
Haviland.....	2				2	
Labette County—						
Altamont.....	1				1	
Bartlett.....	1				1	
Chetopa.....	6				6	
Edna.....	13				13	
Parsons.....	16			1	15	
Oswego.....	1				1	
Lane County—						
Healy.....	2				2	

## SMALLPOX—Continued.

## State Reports for March, 1918—Continued.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
Kansas—Continued.						
Leavenworth County—						
Bain City.....	3				3	
Easton.....	5				5	
Leavenworth.....	13			1	12	
Tonganoxie.....	1				1	
Lincoln County—						
Beverly.....	1				1	
Milo.....	1				1	
Linn County—						
Parker.....	8			1	7	
Lyon County—						
Admire.....	1				1	
Dunlap.....	1				1	
Emporia.....	15				14	1
Marion County—						
Durham.....	1				1	
Hillsboro.....	17				17	
Lehigh.....	6				6	
Marion.....	1				1	
Peabody.....	5				5	
Tampa.....	12				12	
Marshall County—						
Blue Rapids.....	4				4	
Irving.....	2				2	
Lellis.....	1				1	
Vermilion.....	7				7	
McPherson County—						
Galva.....	1				1	
Marquette.....	2				2	
Miami County—						
Beagle.....	1				1	
Hillsdale.....	1				1	
Oswatimie.....	25				24	1
Paola.....	8				8	
Wellsville.....	7				7	
Mitchell County—						
Beloit.....	1				1	
Blue Hill.....	1				1	
Cawker City.....	6				6	
Montgomery County—						
Caney.....	4				4	
Cherryvale.....	11				11	
Coffeyville.....	28			3	25	
Dearing.....	1				1	
Independence.....	8				7	1
Morris County—						
Dunlap.....	1				1	
Council Grove.....	1				1	
White City.....	3				2	1
Nemaha County—						
Corning.....	3				3	
Neosho County—						
Chanute.....	6				6	
Earlton.....	1				1	
Erie.....	1				1	
St. Paul.....	1				1	
Osage County—						
Lyndon.....	3				3	
Olivet.....	3				3	
Osage City.....	3				2	1
Overbrook.....	4				4	
Seranton.....	6				6	
Osborne County—						
Portis.....	1				1	
Woodston.....	1				1	
Pawnee County—						
Larned.....	4				4	
Phillips County—						
Long Island.....	1				1	
Woodruff.....	1			1		

## SMALLPOX—Continued.

## State Reports for March, 1918—Continued.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
Kansas—Continued.						
Pottawatomie County—						
Belvue.....	2				2	
Blaine.....	1				1	
Garrison.....	1				1	
Louisville.....	2				2	
Wamego.....	1				1	
Pratt County—						
Pratt.....	1				1	
Reno County—						
Abbyville.....	1				1	
Haven.....	4				4	
Hutchinson.....	25				25	
Turon.....	4				4	
Whiteside.....	1				1	
Republic County—						
Belleville.....	3			1	1	1
Cuba.....	1				1	
Rydal.....	4				4	
Rice County—						
Little River.....	2				2	
Lyons.....	2				1	1
Raymond.....	1				1	
Wherry.....	1				1	
Riley County—						
Green.....	1				1	
Keats.....	1				1	
Manhattan.....	7			3	4	
Stockdale.....	11				11	
Rooks County—						
Plainville.....	1				1	
Woodston.....	2					2
Russell County—						
Bunker Hill.....	1			1		
Lucas.....	2				2	
Luray.....	2				2	
Saline County—						
Assaria.....	1				1	
Gypsum.....	4			1	3	
New Cambria.....	2				2	
Salina.....	38				38	
Scott County—						
Scott City.....	3		1		2	
Sedgewick County—						
Furley.....	13				13	
Goddard.....	1				1	
Kechi.....	6				6	
Valley Center.....	4				4	
Whitewater.....	1				1	
Wichita.....	102				102	
Seward County—						
Liberal.....	10				10	
Shawnee County—						
Topeka.....	43				43	
Sheridan County—						
Studley.....	3				3	
Smith County—						
Lebanon.....	7				7	
Smith Center.....	2				2	
Stevens County—						
Hugoton.....	3				3	
Rolla.....	1				1	
Sumner County—						
Ashton.....	5				5	
Belle Plaine.....	1				1	
Caldwell.....	1				1	
Oxford.....	2				2	
South Haven.....	1				1	
Wellington.....	2				2	
Trego County—						
Collyer.....	2				2	
Ogallah.....	1				1	

## SMALLPOX—Continued.

## State Reports for March, 1918—Continued.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
Kansas—Continued.						
Wabaunsee County—						
Alta Vista.....	1				1	
Belvue.....	5				5	
Paxico.....	2				2	
Washington County—						
Washington.....	1			1		
Wilson County—						
Altoona.....	3				3	
Fredonia.....	2				2	
Neodesha.....	8				8	
Roper.....	1				1	
Woodson County—						
Rose.....	1				1	
Yates Center.....	7				7	
Wyandotte County—						
Bethel.....	3				3	
Bonner Springs.....	2				2	
Edwardsville.....	1				1	
Muncie.....	4			2	2	
Kansas City.....	153				153	
Rosedale.....	35			1	34	
Total.....	1,604		2	27	1,553	22
Michigan:						
Alcona County—						
Curtis Township.....	1				1	
Harrisville Township.....	1				1	
Alpena County—						
Ossiniki Township.....	1				1	
Antrim County—						
Banks Township.....	1				1	
Arenac County—						
Mason Township.....	1				1	
Standish Township.....	1				1	
Barry County—						
Johnston Township.....	1				1	
Rutland Township.....	5				5	
Pinconning Township.....	6				6	
Pinconning.....	1				1	
Berrien County—						
Sodus Township.....	1				1	
Niles.....	3				3	
Branch County—						
Coldwater.....	2				2	
Calhoun County—						
Albion.....	34				34	
Battle Creek.....	8				8	
Marshall.....	1				1	
Cass County—						
Valinia Township.....	1					1
Dowagiac.....	3				3	
Charlevoix County—						
Charlevoix.....	1				1	
Chippewa County—						
Sault Ste. Marie.....	8		1	2	5	
Clinton County—						
Duplain Township.....	2				2	
Dickinson County—						
Norway.....	6			2	4	
Eaton County—						
Benton Township.....	5				5	
Oneida Township.....	1				1	
Emmet County—						
Pleasant View Township..	1					1
Genesee County—						
Montrose Township.....	9				9	
Richfield Township.....	2				2	
Thetford Township.....	2				2	
Vienna Township.....	2				2	
Clio.....	10				10	
Flint.....	33				33	



## SMALLPOX—Continued.

## State Reports for March, 1918—Continued.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
Michigan—Continued.						
Grand Traverse County—						
Mayfield Township.....	1				1	
Paradise Township.....	4				4	
Traverse City.....	2				2	
Hillsdale County—						
Hillsdale Township.....	1				1	
Ransom Township.....	4				4	
Reading Township.....	1		1			
Hillsdale.....	4				4	
Huron County—						
Lincoln Township.....	3				3	
Wright Township.....	1				1	
Port Hope.....	1				1	
Bad Axe.....	1				1	
Ingham County—						
Aurelius Township.....	1				1	
Delhi Township.....	1				1	
Lansing Township.....	2				2	
Leroy Township.....	1				1	
Locke Township.....	6				6	
Meridian Township.....	1				1	
Webberville.....	7				7	
Williamston.....	2				2	
Lansing.....	25				25	
Ionia County—						
Lake Odessa.....	1				1	
Ionia.....	3				3	
Iosco County—						
Oscoda Township.....	5				5	
Sherman Township.....	10				10	
Wilber Township.....	1				1	
Jackson County—						
Columbia Township.....	1				1	
Liberty Township.....	1				1	
Jackson.....	3			1	2	
Kalamazoo County—						
Schoecraft.....	1				1	
Kalamazoo.....	20				20	
Kent County—						
Plainfield Township.....	1				1	
Sparta.....	1				1	
Grand Rapids.....	21		7		14	
Lake County—						
Chase Township.....	2				2	
Lenawee County—						
Adrian Township.....	4				4	
Dover Township.....	1				1	
Mackinac County—						
Newton Township.....	2				2	
Macomb County—						
Clinton Township.....	1				1	
Mount Clemens.....	2				2	
Manistee County—						
Norman Township.....	1			1		
Manistee.....	1				1	
Mason County—						
Ludington.....	2				2	
Mecosta County—						
Colfax Township.....	6				6	
Big Rapids.....	8				8	
Missaukee County—						
Norwich Township.....	1				1	
Richland Township.....	1				1	
McBain.....	1				1	
Monroe County—						
Welan Township.....	1			1		
Monroe.....	16				16	
Montcalm County—						
Fairplains Township.....	1				1	
Pierson Township.....	2				2	
Howard City.....	5				5	
Sheridan.....	1				1	

## SMALLPOX—Continued.

## State Reports for March, 1918—Continued.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
Michigan—Continued.						
Montmorency County—						
Avery Township.....	1				1	
Muskegon County—						
Muskegon Township.....	9				9	
Norton Township.....	2				2	
Montague.....	1				1	
Muskegon.....	6				6	
Muskegon Heights.....	8				8	
Newago County—						
Monroe Township.....	2				2	
Sherman Township.....	3			2	1	
Wilcox Township.....	4				4	
Oakland County—						
Highland Township.....	1				1	
Royal Oak Township.....	1				1	
Rochester.....	5				5	
Pontiac.....	11				11	
Oceana County—						
Crystal Township.....	2				2	
Shelby Township.....	1				1	
Ogemaw County—						
Mills Township.....	1				1	
Osceola County—						
Middle Branch Township.....	1				1	
Rose Lake Township.....	4				2	2
Leroy.....	3				2	
Oscoda County—						
Mentor Township.....	2				2	
Otsego County—						
Gaylord.....	1				1	
Ottawa County—						
Bendon Township.....	1				1	
Holland Township.....	1				1	
Wright Township.....	1				1	
Presque Isle County—						
Posen Township.....	3				3	
Onaway.....	1				1	
St. Clair County—						
Clyde Township.....	2				2	
St. Joseph County—						
Mendon.....	9				9	
Three Rivers.....	2				2	
Sanilac County—						
Bridgehampton Township.....	3				3	
Delaware Township.....	1				1	
Lamotte Township.....	4				4	
Lexington Township.....	1		1			
Marlette Township.....	3				3	
Sanilac Township.....	1				1	
Washington Township.....	4				4	
Watertown Township.....	1				1	
Wheatland Township.....	2				2	
Lexington.....	1				1	
Schoolcraft County—						
Manistique.....	1				1	
Shiawassee County—						
Antrim Township.....	1					1
Durand.....	1		1			
Tuscola County—						
Akron Township.....	7				7	
Almer Township.....	11				11	
Columbia Township.....	4				4	
Kingston Township.....	5				5	
Akron.....	6				6	
Van Buren County—						
Paw Paw.....	3				3	
Washtenaw County—						
Pittsfield Township.....	2				2	
Ann Arbor.....	1				1	

## SMALLPOX—Continued.

## State Reports for March, 1918—Continued.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
Michigan—Continued.						
Wayne County—						
Brownston Township.....	1				1	
Nankin Township.....	1		1			
Redford Township.....	1				1	
Dearborn.....	4				4	
Ecorse.....	1				1	
Ford.....	1				1	
Highland Park.....	12				12	
Northville.....	1				1	
St. Clair Heights.....	12				12	
Detroit.....	133				133	
Wyandotte.....	2				2	
Wexford County—						
Cherry Grove Township....	1				1	
Henderson Township.....	3				3	
Liberty Township.....	1				1	
Cadillac.....	12				12	
Total.....	689		12	9	662	6
Minnesota:						
Aitkin County—						
Pliny Township.....	1				1	
Anoka County—						
Columbia Heights.....	2				2	
Beltrami County—						
Bemidji.....	7			1	6	
Blue Earth County—						
Mankato.....	1				1	
Beauford Township.....	1			1		
Brown County—						
Leavenworth Township....	2				2	
Cass County—						
Backus.....	1				1	
Chippewa County—						
Crate Township.....	1				1	
Chisago County—						
Rush City.....	2			1	1	
Clay County—						
Moorhead.....	2			1	1	
Cromwell Township.....	1				1	
Clearwater County—						
Leon Township.....	2				2	
Crow Wing County—						
Brainerd.....	22				22	
Dakota County—						
Farmington.....	3			1	2	
Douglas County—						
Alexandria.....	1				1	
Carlos.....	1				1	
Osakis.....	5				5	
Faribault County—						
Elmore.....	1				1	
Fillmore County—						
Peterson.....	1				1	
Arendahl Township.....	1				1	
Freeborn County—						
Hayward Township.....	1				1	
Moscow Township.....	2				2	
Goodhue County—						
Red Wing.....	5		2		2	1
Hennepin County—						
Minneapolis.....	72			13	59	
Wayzata.....	1				1	
Bloomington Township....	1				1	
Corcoran Township.....	1				1	
Dayton Township.....	2				2	
Hassan Township.....	13				13	
Maple Grove Township....	1				1	
Houston County—						
Wilmington Township....	16				16	

## SMALLPOX—Continued.

## State Reports for March, 1918—Continued.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
<b>Minnesota—Continued</b>						
Itasca County—						
Bovey.....	1					1
Jackson County—						
Heron Lake.....	1				1	
La Crosse Township.....	1				1	
Kittson County—						
Hallock.....	4				4	
Lancaster.....	2		1		1	
Hill Township.....	2				2	
Poppleton Township.....	2				2	
Richardville Township.....	1			1		
St. Vincent Township.....	24				24	
Koochiching County—						
International Falls.....	1				1	
Lyon County—						
Marshall.....	4			2	2	
Marshall County—						
Augsburg Township.....	1				1	
Meeker County—						
Litchfield.....	17		2	6	9	
Forest City Township.....	1				1	
Mille Lacs County—						
Milaca.....	7				7	
Mower County—						
Austin.....	1				1	
Adams Township.....	4				4	
Ledi Township.....	2				2	
Murray County—						
Lake Wilson.....	2				2	
Norman County—						
Bear Park Township.....	1				1	
Olmsted County—						
Rochester.....	8			1	7	
Ottertail County—						
Aurdal Township.....	1				1	
Pennington County—						
Reiner Township.....	1				1	
Pine County—						
Hinckley.....	1			1		
Pipestone County—						
Jasper.....	4				4	
Pipestone.....	13			2	2	9
Polk County—						
Fertile.....	1				1	
Ramsey County—						
St. Paul.....	11				11	
Rice County—						
Dennison.....	1				1	
Rock County—						
Rose Dell Township.....	2				2	
Roseau County—						
Jadis Township.....	2				2	
Grimstad Township.....	1				1	
Mickmook Township.....	2				2	
St. Louis County—						
Duluth.....	5				5	
Proctor.....	8				8	
Virginia.....	1				1	
Scott County—						
Shakopee.....	2			1	1	
Stearns County—						
St. Cloud.....	1				1	
Sartell.....	5				5	
Todd County—						
Osakis.....	2				2	
West Union Township.....	1				1	
Wadena County—						
Aldrich Township.....	1				1	
Meadow Township.....	6			1	5	
Washington County—						
Stillwater.....	1				1	

## SMALLPOX—Continued.

## State Reports for March, 1918—Continued.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
<b>Minnesota—Continued.</b>						
Watsonwan County—						
St. James.....	2				2	
St. James Township.....	2				2	
Wright County—						
Cokato Township.....	18					18
Total.....	355		5	33	288	29
<b>New Jersey:</b>						
Atlantic County.....	19			2	17	
Essex County.....	1					1
Morris County.....	3					3
Passaic County.....	1					1
Total.....	24			2	17	5
<b>Wisconsin:</b>						
Ashland County.....	4			2		2
Bayfield County.....	3					3
Buffalo County.....	8				8	
Burnett County.....	9		3		6	
Chippewa County.....	44		1	2	23	18
Crawford County.....	12			1	10	1
Dane County.....	16		15			
Douglas County.....	10		1	1	6	2
Fond du Lac County.....	1					1
Grant County.....	24		1	5	18	
Green County.....	1				1	
Jackson County.....	4				4	
Jefferson County.....	12		4	1	5	2
Kenosha County.....	6				2	4
La Crosse County.....	26			1	25	
Langlade County.....	4			4		
Lincoln County.....	9		7		2	
Manitowoc County.....	1				1	
Marathon County.....	1				1	
Milwaukee County.....	39					39
Monroe County.....	28		1	2	5	20
Oconto County.....	2				1	1
Racine County.....	2		2			
Rock County.....	21			1	17	3
St. Croix County.....	5				3	2
Sheboygan County.....	5				4	1
Trempealeau County.....	1		1			
Washburn County.....	1					1
Washington County.....	2				2	
Waukesha County.....	1		1			
Waupaca County.....	1					1
Winnebago County.....	5				5	
Wood County.....	5				5	
Total.....	313		37	20	154	102

## Miscellaneous State Reports for March, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
<b>Connecticut:</b>					
Hartford County—					
Bloomfield.....	3				
East Windsor.....	1				
Hartford.....	12				
New Britain.....	1				
New London County—					
Montville.....	4				
Total.....	21				
<b>Illinois:</b>					
Adams County—					
Fall Creek Township.....	10				
Loraine.....	4				
Quincy.....	37				
Brown County—					
Elkhorn Township.....	1				
Bureau County—					
Arispie Township.....	1				
Mineral.....	5				
Mineral Township.....	15				

## SMALLPOX—Continued.

## Miscellaneous State Reports for March, 1918—Continued.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Illinois—Continued.			Illinois—Continued.		
Calhoun County.....	1		Jackson County—		
Batchtown.....	2		Bradley Township....	4	
Cass County—			Campbell Hill.....	3	
Beardstown.....	4		Degonia Township..	1	
Champaign County—			De Soto.....	1	
Champaign.....	1		De Soto Township....	3	
Urbana.....	1		Elk Township.....	5	
Christian County—			Murphysboro.....	1	
Taylorville.....	2		Jefferson County—		
Morrisonville.....	3		Elk Prairie Township.	2	
Ricks Township.....	4		Mount Vernon.....	1	
Clinton County—			Jersey County—		
Lake Township.....	1		Jerseyville.....	12	
Wade Township.....	1		Ruyle Township.....	4	
Coles County—			Jo Daviess County—		
East Oakland Town-			Galena.....	2	
ship.....	1		Johnson County—		
Cook County—			Vienna.....	1	
Chicago.....	50		Knox County—		
Cicero.....	1		Galesburg.....	18	
Evanston.....	1		La Salle County—		
La Grange.....	1		Richland Township..	1	
La Grange Park.....	1		Lawrence County—		
Lemont.....	2		Dennison Township..	2	
Oak Park.....	1		Lawrenceville.....	3	
Cumberland County—			Logan County—		
Summit Township....	1		Lincoln.....	1	
Toledo.....	1		Macon County—		
Union Township.....	1		Decatur.....	4	
Douglas County—			Friends Creek Town-		
Sargent Township....	1		ship.....	1	
Edgar County—			Macoupin County—		
Edgar Township.....	7		Barr Township.....	1	
Elbridge Township....	6		Bunker Hill Town-		
Hume.....	1		ship.....	1	
Kansas.....	2		Carlinville.....	2	
Paris.....	1		Gillespie.....	1	
Effingham County—			Hilyard Township....	2	
Effingham.....	2		Honey Point Town-		
Fayette County—			ship.....	1	
Ramsey Township....	2		Medora.....	12	
Sefton Township.....	1		Mount Olive Town-		
Seminary Township..	5		ship.....	38	
St. Elmo.....	1		Pease Township.....	2	
St. Peter.....	1		Scottville.....	1	
Wilberton Township..	7		Shipman.....	3	
Vandalia Township....	1		South Otter Town-		
Franklin County—			ship.....	1	
Benton.....	8		Palmyra.....	7	
Buckner.....	1		South Palmyra Town-		
Cave Township.....	8		ship.....	4	
Christopher.....	1		Staunton.....	6	
Good Hope Township.	9		Viriden.....	20	
Six Mile Township....	7		White City.....	29	
Sesser.....	1		Madison County—		
West City.....	4		Alton.....	75	
Ziegler.....	4		Collinsville.....	19	
Fulton County—			East Alton.....	1	
Canton.....	1		Fosterbury Township	1	
Farmington.....	5		Granite City.....	27	
Greene County—			Godfrey Township....	2	
Bluffdale Township..	1		Madison.....	4	
Carrollton.....	4		Venice.....	13	
Patterson Township..	1		Wood River.....	2	
Rockybridge Town-			Marion County—		
ship.....	1		Odin.....	20	
Hamilton County—			Odin Township.....	3	
Flannigan Township.	4		Salem Township.....	2	
Knights Prairie			Mason County—		
Township.....	1		Easton.....	1	
Hancock County—			Massac County—		
Basco.....	2		Metropolis.....	1	
Hardin County.....	2		McDonough County—		
Henderson County—			Bushnell.....	4	
Stronghurst.....	2		Emmet Township....	5	
Henry County—			Good Hope.....	3	
Annawan.....	8		McLean County—		
Kewanee.....	2		Bloomington.....	1	
Lorraine Township...	1		Chenoa.....	1	
Iroquois County—			Le Roy.....	1	
Watseka.....	1		Money Creek Town-		
			ship.....	1	



## SMALLPOX—Continued.

## Miscellaneous State Reports for March, 1918—Continued.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Illinois—Continued.			Illinois—Continued.		
Montgomery County—			Tazewell County—		
Coffee.....	6	.....	Cincinnati Township.....	1	.....
East York Township.....	2	.....	East Peoria.....	3	.....
Morgan County—			Pekin.....	1	.....
Jacksonville.....	5	.....	South Pekin.....	1	.....
Moultrie County—			Union County—		
Sullivan.....	6	.....	Dongola.....	4	.....
Peoria County—			Vermilion County—		
Averyville.....	2	.....	Danville.....	3	.....
Brimfield.....	1	.....	Wabash County—		
Brimfield Township.....	1	.....	Mount Carmel.....	1	.....
Chillicothe Township.....	1	.....	Warren County—		
Kickapoo Township.....	1	.....	Monmouth.....	1	.....
Limestone Township.....	1	.....	Washington County—		
Peoria.....	31	.....	Nashville.....	1	.....
Peoria Heights.....	1	.....	Wayne County—		
Perry County—			Indian Prairie Town-		
Duquoin.....	14	.....	ship.....	1	.....
Platt County—			White County—		
Cisco.....	1	.....	Enfield.....	1	.....
Willow Branch Town-			Whitesides County—		
ship.....	3	.....	Fulton.....	3	.....
Pike County—			Williamson County—		
Atlas Township.....	1	.....	Blairsville Township.....	6	.....
Flint Township.....	1	.....	Bush.....	3	.....
Neuberg Township.....	1	.....	Cambria.....	5	.....
Pleasant Hill.....	1	.....	Carterville.....	5	.....
Pleasant Hill Town-			Carterville Township.....	10	.....
ship.....	1	.....	Creal Springs.....	2	.....
Pulaski County—			East Marion Town-		
Mound City.....	3	.....	ship.....	3	.....
Randolph County—			Eight Mile Town-		
Percy.....	11	.....	ship.....	2	.....
Red Bud.....	3	.....	Energy.....	5	.....
Rockwood.....	2	.....	Herrin.....	22	.....
Rockwood Precinct.....	9	.....	Hurst.....	2	.....
Richland County—			Marion.....	1	.....
Olney Township.....	1	.....	Stonemfort Township.....	1	.....
Rock Island County—			Winnebago County—		
Moline.....	3	.....	Rockford.....	4	.....
Rock Island.....	2	.....	Rockton.....	3	.....
Saline County—			Woodford County—		
East Eldorado Town-			Greene Township.....	1	.....
ship.....	2	.....	Palestine Township.....	2	.....
Eldorado.....	9	.....	Seco.....	1	.....
Galatia Township.....	5	.....	Southern Illinois Peni-		
Gaskins City.....	4	.....	tentiary.....	3	.....
Harrisburg.....	6	.....	Total.....	999	.....
Harrisburg Township.....	3	.....			
Independence Town-			Iowa:		
ship.....	2	.....	Adair County.....	3	.....
Sangamon County—			Adams County.....	10	.....
Chatham Township.....	1	.....	Appanoose County.....	4	.....
Springfield.....	8	.....	Audubon County.....	4	.....
Williamsville.....	1	.....	Benton County.....	1	.....
Shelby County—			Blackhawk County.....	4	.....
Herrick Township.....	8	.....	Boone County.....	5	.....
Shelbyville.....	2	.....	Bremer County.....	5	.....
St. Clair County—			Buena Vista County.....	1	.....
Belleville.....	15	.....	Butler County.....	5	.....
Centerville Township.....	1	.....	Cass County.....	5	.....
Dupo.....	1	.....	Cedar County.....	2	.....
East St. Louis.....	12	.....	Cerro Gordo County.....	17	.....
Englemann Town-			Cherokee County.....	2	.....
ship.....	1	.....	Clay County.....	1	.....
Freeburg.....	12	.....	Clayton County.....	7	.....
Marissa.....	4	.....	Crawford County.....	1	.....
Mascoutah.....	3	.....	Dallas County.....	3	.....
Milstadt.....	8	.....	Davis County.....	2	.....
New Baden.....	3	.....	Decatur County.....	2	.....
Smithton.....	1	.....	Des Moines County.....	7	.....
St. Clair Township.....	2	.....	Dickinson County.....	4	.....
Swansea.....	1	.....	Dubuque County.....	16	.....
Stark County—			Emmet County.....	2	.....
Toulon.....	1	.....	Fremont County.....	7	.....
Stephenson County—			Grundy County.....	1	.....
Dakota.....	1	.....	Guthrie County.....	1	.....
Freeport.....	6	.....	Hancock County.....	5	.....

## SMALLPOX—Continued.

## Miscellaneous State Reports for March, 1918—Continued.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
<b>Iowa—Continued.</b>			<b>Mississippi—Continued.</b>		
Hardin County.....	1	.....	Quitman County.....	5	.....
Harrison County.....	12	.....	Rankin County.....	7	.....
Henry County.....	2	.....	Scott County.....	5	.....
Howard County.....	5	.....	Sharkey County.....	1	.....
Humboldt County.....	4	.....	Stone County.....	7	.....
Jasper County.....	8	.....	Sunflower County.....	33	.....
Johnson County.....	7	.....	Tallahatchie County.....	44	.....
Kossuth County.....	5	.....	Tate County.....	21	.....
Linn County.....	14	.....	Tippah County.....	2	.....
Lyon County.....	1	.....	Tishomingo County.....	1	.....
Madison County.....	11	.....	Tunica County.....	1	.....
Marion County.....	2	.....	Union County.....	6	.....
Mills County.....	6	.....	Warren County.....	11	.....
Mitchell County.....	14	.....	Washington County.....	7	.....
O'Brien County.....	1	.....	Webster County.....	4	.....
Palo Alto County.....	2	.....	Yalobusha County.....	4	.....
Pocahontas County.....	1	.....	Yazoo County.....	9	.....
Polk County.....	120	.....	<b>Total.....</b>	<b>622</b>	.....
Pottawattamie County.....	95	1	<b>Nebraska:</b>		
Poweshiek County.....	3	.....	Adams County.....	14	.....
Ringgold County.....	3	.....	Antelope County.....	4	.....
Scott County.....	5	.....	Arthur County.....	6	.....
Sioux County.....	3	.....	Boone County.....	2	.....
Taylor County.....	3	.....	Box Butte County.....	6	.....
Van Buren County.....	36	.....	Boyd County.....	1	.....
Wapello County.....	40	.....	Buffalo County.....	6	.....
Warren County.....	1	.....	Burt County.....	5	.....
Washington County.....	2	.....	Butler County.....	2	.....
Wayne County.....	5	.....	Cass County.....	3	.....
Webster County.....	7	.....	Cherry County.....	45	.....
Winnebago County.....	6	.....	Cheyenne County.....	53	.....
Winnesiek County.....	2	.....	Custer County.....	19	.....
Woodbury County.....	2	.....	Dixon County.....	8	.....
<b>Total.....</b>	<b>556</b>	<b>1</b>	Douglas County.....	161	.....
<b>Mississippi:</b>			Fillmore County.....	31	.....
Adams County.....	4	.....	Franklin County.....	2	.....
Alcorn County.....	3	.....	Furnas County.....	11	.....
Amite County.....	16	.....	Grant County.....	6	.....
Attala County.....	10	.....	Greeley County.....	2	.....
Benton County.....	1	.....	Hall County.....	6	.....
Bolivar County.....	21	.....	Hitchcock County.....	6	.....
Calhoun County.....	4	.....	Holt County.....	12	.....
Carroll County.....	12	.....	Johnson County.....	8	.....
Chickasaw County.....	16	.....	Lancaster County.....	54	.....
Clarke County.....	10	.....	Madison County.....	50	.....
Clay County.....	6	.....	Nance County.....	23	.....
Coahoma County.....	15	.....	Nemaha County.....	1	.....
Copiah County.....	2	.....	Otoe County.....	46	.....
Covington County.....	3	.....	Pawnee County.....	12	.....
Forrest County.....	6	.....	Phelps County.....	2	.....
George County.....	2	.....	Platte County.....	1	.....
Greene County.....	1	.....	Polk County.....	4	.....
Grenada County.....	2	.....	Red Willow County.....	1	.....
Harrison County.....	2	.....	Richardson County.....	24	.....
Hinds County.....	36	.....	Saunders County.....	1	.....
Holmes County.....	13	.....	Scotts Bluff County.....	4	.....
Issaquena County.....	2	.....	Seward County.....	10	.....
Itawamba County.....	6	.....	Sheridan County.....	10	.....
Jasper County.....	73	.....	Sherman County.....	1	.....
Jones County.....	11	.....	Sioux County.....	9	.....
Lafayette County.....	4	.....	Thayer County.....	13	.....
Lauderdale County.....	11	.....	Thurston County.....	14	.....
Lee County.....	16	.....	Valley County.....	1	.....
Leflore County.....	39	.....	Washington County.....	15	.....
Lincoln County.....	2	.....	Wayne County.....	34	.....
Lowndes County.....	10	.....	Webster County.....	3	.....
Madison County.....	18	.....	Wheeler County.....	3	.....
Marshall County.....	1	.....	York County.....	1	.....
Monroe County.....	3	.....	<b>Total.....</b>	<b>756</b>	.....
Montgomery County.....	6	.....	<b>North Carolina:</b>		
Oktibbeha County.....	10	.....	Alleghany County.....	4	.....
Panola County.....	23	.....	Ashe County.....	1	.....
Pearl River County.....	5	.....	Avery County.....	12	.....
Perry County.....	9	.....	Buncombe County.....	4	.....
Pike County.....	1	.....	Cabarrus County.....	2	.....
Pontotoc County.....	13	.....			
Prentiss County.....	6	.....			

## SMALLPOX—Continued.

## Miscellaneous State Reports for March, 1918—Continued.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
<b>North Carolina—Continued.</b>			<b>Pennsylvania—Continued.</b>		
Catawba County.....	1	.....	Indiana County.....	2	.....
Clay County.....	1	.....	Lackawanna County.....	1	.....
Columbus County.....	2	.....	Mercer County.....	3	.....
Cumberland County.....	2	.....	McKean County.....	1	.....
Currituck County.....	1	.....	Mifflin County.....	1	.....
Edgecombe County.....	19	.....	Philadelphia County.....	7	.....
Forsyth County.....	4	.....	Potter County.....	2	.....
Gaston County.....	9	.....	Somerset County.....	1	.....
Haywood County.....	6	.....	Tioga County.....	7	.....
Jackson County.....	10	.....	Westmoreland County.....	2	.....
Johnston County.....	1	.....	York County.....	7	.....
Lee County.....	4	.....	Total.....	89	.....
McDowell County.....	4	.....	<b>South Carolina:</b>		
Perquimans County.....	2	.....	Greenville County.....	2	.....
Randolph County.....	4	.....	Spartanburg County.....	10	.....
Rowan County.....	10	.....	Total.....	12	.....
Stanly County.....	24	.....	<b>South Dakota:</b>		
Surry County.....	5	.....	Bon Homme County.....	1	.....
Swain County.....	2	.....	Brown County.....	21	.....
Union County.....	1	.....	Clay County.....	26	.....
Wayne County.....	1	.....	Codington County.....	8	.....
Wilkes County.....	1	.....	Davison County.....	2	.....
Total.....	137	.....	Deuel County.....	7	.....
<b>North Dakota:</b>			Edmunds County.....	1	.....
Bottineau County.....	4	.....	Hand County.....	15	.....
Burleigh County.....	1	.....	Hanson County.....	2	.....
Cass County.....	4	.....	Hughes County.....	2	.....
Foster County.....	8	.....	Hyde County.....	5	.....
Grand Forks County.....	15	.....	Jones County.....	1	.....
Griggs County.....	1	.....	Kingsbury County.....	2	.....
La Moure County.....	6	.....	Lake County.....	1	.....
McKenzie County.....	3	.....	Lawrence County.....	1	.....
Mountrail County.....	5	.....	McCook County.....	12	.....
Nelson County.....	2	.....	Minnehaha County.....	2	.....
Pembina County.....	1	.....	Roberts County.....	4	.....
Ramsey County.....	2	.....	Union County.....	6	.....
Renville County.....	2	.....	Walworth County.....	3	.....
Richland County.....	3	.....	Yankton County.....	2	.....
Sargent County.....	5	.....	Total.....	124	.....
Ward County.....	6	.....	<b>Wyoming:</b>		
Williams County.....	4	.....	Laramie County.....	2	.....
Total.....	72	.....	Johnson County.....	6	.....
<b>Pennsylvania:</b>			Hot Springs County.....	1	.....
Allegheny County.....	14	.....	Nebraska County.....	1	.....
Armstrong County.....	2	.....	Albany County.....	1	.....
Cambria County.....	10	.....	Washakie County.....	5	.....
Clearfield County.....	2	.....	Natrona County.....	21	.....
Dauphin County.....	18	.....	Carbon County.....	13	.....
Elk County.....	1	.....	Total.....	50	.....
Erie County.....	5	.....			
Fayette County.....	1	.....			
Greene County.....	2	.....			

## City Reports for Week Ended Apr. 13, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio.....	17	.....	Chanute, Kans.....	1	.....
Alton, Ill.....	21	.....	Chattanooga, Tenn.....	5	.....
Ann Arbor, Mich.....	1	.....	Chicago, Ill.....	4	.....
Anniston, Ala.....	11	.....	Chillicothe, Ohio.....	1	.....
Appleton, Wis.....	1	.....	Cincinnati, Ohio.....	14	.....
Atlanta, Ga.....	6	.....	Cleveland, Ohio.....	22	.....
Baltimore, Md.....	5	.....	Coffeyville, Kans.....	5	.....
Beloit, Wis.....	2	.....	Colorado Springs, Colo.....	1	.....
Birmingham, Ala.....	25	.....	Columbus, Ohio.....	1	.....
Butte, Mont.....	1	.....	Council Bluffs, Iowa.....	13	.....
Canton, Ohio.....	3	.....	Covington, Ky.....	1	.....
Cape Girardeau, Mo.....	3	.....	Dallas, Tex.....	3	.....
Centralla, Ill.....	1	.....	Davenport, Iowa.....	1	.....

## SMALLPOX—Continued.

## City Reports for Week Ended Apr. 13, 1918—Continued.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Dayton, Ohio.....	1	.....	Mason City, Iowa.....	1	.....
Denver, Colo.....	30	.....	Memphis, Tenn.....	14	.....
Des Moines, Iowa.....	9	.....	Milwaukee, Wis.....	10	.....
Detroit, Mich.....	17	.....	Minneapolis, Minn.....	20	.....
Dubuque, Iowa.....	4	.....	Mobile, Ala.....	5	.....
Elmira, N. Y.....	2	.....	Montgomery, Ala.....	3	.....
El Paso, Tex.....	3	.....	Muncie, Ind.....	5	.....
Everett, Wash.....	1	.....	Muskogee, Okla.....	11	.....
Fargo, N. Dak.....	1	.....	Nashville, Tenn.....	8	.....
Flint, Mich.....	1	.....	New Albany, Ind.....	1	.....
Fort Scott, Kans.....	19	.....	New Castle, Ind.....	2	.....
Fort Smith, Ark.....	4	.....	New Orleans, La.....	5	.....
Fort Wayne, Ind.....	1	.....	North Little Rock, Ark.....	2	.....
Fort Worth, Tex.....	17	.....	Ogden, Utah.....	1	.....
Fresno, Cal.....	1	.....	Oklahoma City, Okla.....	22	.....
Galesburg, Ill.....	1	.....	Omaha, Nebr.....	30	.....
Grand Forks, N. Dak.....	2	.....	Parkersburg, W. Va.....	5	.....
Grand Rapids, Mich.....	3	.....	Pittsburgh, Pa.....	1	.....
Greeley, Colo.....	3	.....	Pontiac, Mich.....	1	.....
Hammond, Ind.....	1	.....	Portland, Oreg.....	1	.....
Hattiesburg, Miss.....	3	.....	Provo, Utah.....	3	.....
Houston, Tex.....	2	.....	Quincy, Ill.....	22	.....
Indianapolis, Ind.....	40	.....	Richmond, Ind.....	1	.....
Iola, Kans.....	10	.....	Roanoke, Va.....	1	.....
Janesville, Wis.....	3	.....	Saginaw, Mich.....	3	.....
Joplin, Mo.....	3	.....	St. Joseph, Mo.....	8	.....
Kalamazoo, Mich.....	4	.....	St. Louis, Mo.....	9	.....
Kansas City, Kans.....	21	.....	St. Paul, Minn.....	9	.....
Kenosha, Wis.....	5	.....	Salina, Kans.....	5	.....
Knoxville, Tenn.....	1	.....	Salt Lake City, Utah.....	14	.....
Kokomo, Ind.....	1	.....	San Francisco, Cal.....	4	.....
La Crosse, Wis.....	1	.....	Seattle, Wash.....	6	.....
Lawrence, Kans.....	3	.....	Sioux City, Iowa.....	9	.....
Leavenworth, Kans.....	3	.....	South Bend, Ind.....	1	.....
Lexington, Ky.....	2	.....	Spokane, Wash.....	6	.....
Lincoln, Nebr.....	15	.....	Springfield, Ill.....	1	.....
Little Rock, Ark.....	7	.....	Steelton, Pa.....	1	.....
Logansport, Ind.....	2	.....	Steubenville, Ohio.....	2	.....
Lorain, Ohio.....	3	.....	Terre Haute, Ind.....	7	.....
Los Angeles, Cal.....	3	.....	Toledo, Ohio.....	1	.....
Louisville, Ky.....	4	.....	Topeka, Kans.....	3	.....
Macon, Ga.....	1	.....	Winston-Salem, N. C.....	4	.....
Madison, Wis.....	3	.....	York, Pa.....	2	.....
Marion, Ind.....	2	.....	Zanesville, Ohio.....	2	.....

## TETANUS.

## City Reports for Week Ended Apr. 13, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Los Angeles, Cal.....	1	.....	Providence, R. I.....	.....	1
Macon, Ga.....	.....	1	Saginaw, Mich.....	1	.....
Newark, N. J.....	1	.....			

## TUBERCULOSIS.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 702.

## TYPHOID FEVER.

## State Reports for March, 1918.

Place.	New cases reported.	Place.	New cases reported.
<b>Connecticut:</b>		<b>Illinois—Continued.</b>	
Fairfield County—		Saline County—	
Norwalk.....	1	Eldorado.....	1
Hartford County—		Schuyler County—	
Bristol.....	1	Rushville Township.....	1
Hartford.....	1	Stephenson County—	
New Britain.....	1	Dakota.....	2
Windsor Locks.....	1	St. Clair County—	
New Haven County—		East St. Louis.....	1
Ansonia.....	1	Vermilion County—	
New Haven.....	1	Danville.....	1
Wallingford.....	1	Warren County—	
Waterbury.....	1	Monmouth Township.....	1
New London County—		Wayne County—	
Jewett City.....	1	Sims.....	1
Tolland County—		Will County—	
Stafford Springs.....	1	Joliet Township.....	3
Total.....	11	Williamson County—	
<b>Illinois:</b>		Cambria.....	1
Adams County—		Winnebago County—	
Quincy.....	4	Rockford.....	3
Clinton County—		Total.....	91
Carlyle Township.....	1	<b>Kansas:</b>	
Cook County—		Allen County—	
Chicago.....	21	Iola.....	1
Glencoe.....	1	Anderson County—	
Mount Prospect.....	1	Garnett.....	1
Cumberland County—		Atchison County—	
Sumpter Township.....	1	Atchison.....	1
Douglas County—		Huron.....	1
Tuscola Township.....	1	Muscotah.....	1
Edgar County—		Bourbon County—	
Paris.....	1	Redfield.....	1
Franklin County—		Butler County—	
Macedonia.....	5	El Dorado.....	2
Fulton County—		Cherokee County—	
Lewistown.....	1	Treece.....	1
Henry County—		Cloud County—	
Kewanee.....	1	Glasco.....	1
Iroquois County—		Coffey County—	
Woodland.....	2	Lebo.....	1
Jo Daviess County—		Dickinson County—	
Galena.....	1	Elmo.....	1
Kane County—		Greenwood County—	
Batavia.....	1	Eureka.....	1
Kankakee County—		Toronto.....	2
Kankakee.....	1	Kingman County—	
Lake County—		Nashville.....	1
Lake Forest.....	2	Leavenworth County—	
North Chicago.....	1	Lansing.....	2
Waukegan.....	3	Lincoln County—	
La Salle County—		Vesper.....	1
Freedom Township.....	1	Lyon County—	
Peru.....	1	Allen.....	1
Livingston County—		Miami County—	
Pontiac.....	2	Paola.....	1
Macon County—		Montgomery County—	
Decatur.....	1	Coffeyville.....	1
Madison County—		Independence.....	1
Granite City.....	1	Morton County—	
Monroe County—		Elkhart.....	1
Du Long Township.....	1	Neosho County—	
Montgomery County—		Chanute.....	2
Harvel.....	1	St. Paul.....	1
Marshall County—		Reno County—	
Wenona.....	1	Hutchinson.....	1
McHenry County—		Republic County—	
Crystal Lake.....	1	Belleville.....	2
Pike County—		Rice County—	
Pleasant Hill.....	2	Sterling.....	1
Randolph County—		Riley County—	
Sparta.....	3	Ogden.....	2
Rock Island—		Saline County—	
East Moline.....	3	Salina.....	1
Moline.....	8	Smith County—	
Rock Island.....	1	Smith Center.....	1

## TYPHOID FEVER—Continued.

## State Reports for March, 1918—Continued.

Place.	New cases reported.	Place.	New cases reported.
<b>Kansas—Continued.</b>		<b>Minnesota—Continued.</b>	
Wallace County—		Pennington County—	
Wallace.....	1	St. Hilaire.....	1
Wilson County—		Thief River Falls.....	1
North Altoona.....	12	Ramsey County—	
Woodson County—		St. Paul.....	1
Yates Center.....	2	Red Lake County—	
Wyandotte County—		Red Lake Falls.....	1
Kansas City.....	5	River Township.....	3
Total.....	56	Redwood County—	
<b>Michigan:</b>		Wabasso.....	1
Alpena County—		Roseau County—	
Alpena.....	1	Roseau.....	1
Bay County—		St. Louis County—	
Bay City.....	5	Duluth.....	3
Calhoun County—		Ely.....	1
Battle Creek.....	1	Eveleth.....	1
Delta County—		Iron Junction.....	1
Escanaba.....	13	Wright County—	
Genesee County—		Cokato.....	1
Flint.....	6	Total.....	81
Ingham County—		<b>Mississippi:</b>	
Lansing.....	2	Adams County.....	6
Isabella County—		Amite County.....	1
Mount Pleasant.....	1	Attala County.....	2
Kent County—		Benton County.....	4
Lowell.....	2	Bolivar County.....	3
Grand Rapids.....	10	Calhoun County.....	1
Lenawee County—		Carroll County.....	6
Adrian Township.....	1	Chalborne County.....	1
Cambridge Township.....	1	Clarke County.....	4
Marquette County—		Coahoma County.....	2
Marquette.....	1	Copiah County.....	2
Negaunee.....	2	Covington County.....	1
Midland County—		De Soto County.....	1
Midland.....	1	Forrest County.....	8
Montcalm County—		Franklin County.....	3
Howard City.....	2	Hancock County.....	2
Oakland County—		Hinds County.....	2
Royal Oak.....	5	Jackson County.....	2
Pontiac.....	2	Jasper County.....	2
Ontonagon County—		Jefferson County.....	1
Ontonagon.....	1	Jones County.....	4
Saginaw County—		Lafayette County.....	8
Saginaw.....	5	Lauderdale County.....	2
St. Clair County—		Lawrence County.....	3
Ira Township.....	1	Leflore County.....	2
Van Buren County—		Madison County.....	3
Paw Paw.....	1	Marion County.....	1
Wayne County—		Marshall County.....	1
Ford.....	2	Oktibbeha County.....	3
Wyandotte.....	3	Panola County.....	3
Total.....	69	Pearl River County.....	3
<b>Minnesota:</b>		Pike County.....	2
Beltrami County—		Pontotoc County.....	2
Baudette.....	1	Prentiss County.....	1
Bigstone County—		Rankin County.....	2
Graceville.....	1	Scott County.....	2
Carlton County—		Sharkey County.....	1
Barnum.....	1	Simpson County.....	2
Cloquet.....	1	Smith County.....	7
Carver County—		Stone County.....	9
Watertown Township.....	3	Sunflower County.....	9
Goodhue County—		Tate County.....	2
Red Wing.....	1	Tippah County.....	2
Hennepin County—		Tishomingo County.....	3
Minneapolis.....	50	Union County.....	1
Wayzata.....	1	Warren County.....	2
Lyon County—		Washington County.....	3
Cottonwood.....	1	Wayne County.....	1
Morrison County—		Webster County.....	3
Pierz.....	1	Wilkinson County.....	2
Mower County—		Winston County.....	3
Austin.....	2	Yazoo County.....	15
Ottertail County—		Total.....	155
Fergus Falls.....	2		



## TYPHOID FEVER—Continued.

## State Reports for March, 1918—Continued.

Place.	New cases reported.	Place.	New cases reported.
Nebraska:		Pennsylvania—Continued.	
Douglas County.....	2	Columbia County.....	3
Richardson County.....	1	Cumberland County.....	2
Total.....	3	Dauphin County.....	1
Nevada:		Delaware County.....	10
Clark County.....	3	Fayette County.....	7
Lander County.....	1	Franklin County.....	1
White Pine County.....	3	Huntingdon County.....	2
Total.....	7	Jefferson County.....	2
New Jersey:		Juniata County.....	5
Atlantic County.....	2	Lackawanna County.....	6
Bergen County.....	3	Lancaster County.....	7
Burlington County.....	5	Lawrence County.....	4
Cumberland County.....	1	Lebanon County.....	2
Essex County.....	11	Lehigh County.....	11
Gloucester County.....	3	Luzerne County.....	3
Hudson County.....	7	Lycoming County.....	1
Mercer County.....	1	Mercer County.....	14
Monmouth County.....	5	Montgomery County.....	6
Morris County.....	1	Montour County.....	2
Ocean County.....	1	Northampton County.....	3
Passaic County.....	1	Northumberland County.....	1
Salem County.....	1	Philadelphia County.....	20
Union County.....	3	Schuykill County.....	7
Total.....	45	Somerset County.....	4
North Carolina:		Tioga County.....	1
Alamance County.....	1	Union County.....	1
Anson County.....	3	Venango County.....	1
Craven County.....	1	Washington County.....	10
Cumberland County.....	1	Westmoreland County.....	12
Davidson County.....	1	Wyoming County.....	1
Edgecombe County.....	1	York County.....	15
Gaston County.....	2	Total.....	328
Jackson County.....	1	South Carolina:	
Johnston County.....	1	Charleston County.....	2
Lenoir County.....	1	Greenville County.....	1
Martin County.....	2	Laurens County.....	1
Montgomery County.....	1	Richland County.....	2
Pitt County.....	3	Spartanburg County.....	4
Rockingham County.....	2	Total.....	10
Rowan County.....	3	South Dakota:	
Swain County.....	1	Brown County.....	1
Warren County.....	1	Corson County.....	1
Total.....	26	Davison County.....	1
North Dakota:		Grant County.....	1
Dunn County.....	2	Minnehaha County.....	2
Golden Valley County.....	1	Walworth County.....	7
Morton County.....	1	Total.....	13
Pierce County.....	1	Wisconsin:	
Renville County.....	1	Barron County.....	2
Williams County.....	2	Bayfield County.....	2
Total.....	8	Dane County.....	1
Pennsylvania:		Douglas County.....	14
Adams County.....	2	Kenosha County.....	1
Allegheny County.....	76	La Crosse County.....	1
Armstrong County.....	36	Lafayette County.....	3
Beaver County.....	3	Milwaukee County.....	21
Bedford County.....	4	Outagamie County.....	1
Berks County.....	4	Pepin County.....	1
Blair County.....	12	Rock County.....	1
Bradford County.....	1	Sheboygan County.....	2
Bucks County.....	1	Trempealeau County.....	5
Butler County.....	5	Washington County.....	1
Cambria County.....	3	Total.....	56
Chester County.....	1	Wyoming:	
Clarion County.....	14	Uinta County.....	1
Clearfield County.....	1	Washakie County.....	1
	1	Total.....	2

## TYPHOID FEVER—Continued.

City Reports for Week Ended Apr. 13, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alexandria, La.	1	—	Macon, Ga.	1	—
Alton, Ill.	1	—	McKeesport, Pa.	—	1
Atlanta, Ga.	2	—	Milwaukee, Wis.	3	2
Baltimore, Md.	—	1	Minneapolis, Minn.	6	—
Bedford, Ind.	1	—	Mobile, Ala.	2	—
Beloit, Wis.	1	—	Moline, Ill.	1	—
Berkeley, Cal.	1	—	Morgantown, W. Va.	2	—
Birmingham, Ala.	3	—	Nashville, Tenn.	2	—
Boston, Mass.	3	—	Newark, N. J.	1	1
Buffalo, N. Y.	2	1	New Britain, Conn.	1	1
Burlington, Vt.	1	1	New Haven, Conn.	2	—
Cambridge, Mass.	1	—	New Orleans, La.	4	—
Charlotte, N. C.	—	1	Newton, Mass.	1	—
Chicago, Ill.	4	—	New York, N. Y.	7	2
Chillicothe, Ohio.	2	—	North Yakima, Wash.	1	—
Cincinnati, Ohio.	1	—	Oakland, Cal.	2	—
Cleveland, Ohio.	3	1	Ogden, Utah.	1	—
Covington, Ky.	2	1	Oshkosh, Wis.	1	—
Davenport, Iowa.	1	—	Parkersburg, W. Va.	1	—
Dayton, Ohio.	—	1	Philadelphia, Pa.	5	—
Denver, Colo.	1	—	Pittsburgh, Pa.	4	2
Detroit, Mich.	6	1	Portland, Oreg.	3	—
Easton, Pa.	1	—	Providence, R. I.	3	1
Elmira, N. Y.	1	—	Reading, Pa.	1	—
Fall River, Mass.	2	—	Richmond, Va.	—	1
Fitchburg, Mass.	1	—	Saginaw, Mich.	1	—
Flint, Mich.	1	—	Salt Lake City, Utah.	1	—
Fort Wayne, Ind.	1	—	Sandusky, Ohio.	1	—
Fort Worth, Tex.	1	1	Schenectady, N. Y.	1	—
Grand Rapids, Mich.	—	1	Scranton, Pa.	—	1
Hattiesburg, Miss.	1	—	Sheboygan, Wis.	1	—
Hoboken, N. J.	2	—	Springfield, Ill.	—	1
Jacksonville, Fla.	1	—	Troy, N. Y.	1	1
Jersey City, N. J.	1	—	Washington, D. C.	1	1
Knoxville, Tenn.	1	1	Watertown, N. Y.	1	—
Lawrence, Mass.	2	—	Winston-Salem, N. C.	1	—
Little Rock, Ark.	2	—	Woonsocket, R. I.	1	—
Los Angeles, Cal.	1	—	Zanesville, Ohio.	1	—
Louisville, Ky.	1	—			

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

State Reports for March, 1918.

State.	Cases reported.			State.	Cases reported.		
	Diphtheria.	Measles.	Scarlet fever.		Diphtheria.	Measles.	Scarlet fever.
Connecticut	203	773	178	New Jersey	402	5,541	400
Illinois	796	4,005	682	North Carolina	50	1,707	15
Iowa	73	—	385	North Dakota	49	287	134
Kansas	128	1,504	576	Pennsylvania	1,046	8,146	1,119
Michigan	479	989	715	South Carolina	68	197	9
Minnesota	339	513	809	South Dakota	27	375	156
Mississippi	335	7,742	26	Wisconsin	138	4,034	609
Nebraska	21	214	143	Wyoming	19	227	80
Nevada	3	76	6				

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

## City Reports for Week Ended Apr. 13, 1918.

City.	Popula- tion as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Over 500,000 inhabitants:										
Baltimore, Md.	589,621	283	14	3	443	4	3		27	31
Boston, Mass.	756,476		70	7	321	6	24		63	36
Chicago, Ill.	2,497,722	904	114	21	68	3	45	3	340	85
Cleveland, Ohio.	674,073	277	12	1	43	2	5		59	27
Detroit, Mich.	571,784	329	43	3	53	1	38		46	26
Los Angeles, Cal.	503,812	118	22	1	160		6		20	17
New York, N. Y.	5,602,841	1,910	320	34	1,471	37	118	6	533	248
Philadelphia, Pa.	1,709,518	602	69	4	625	2	41	1	222	88
Pittsburgh, Pa.	579,090	309	11	1	240	2	9		35	8
St. Louis, Mo.	757,309	251	52	1	99		31	1	45	26
From 300,000 to 500,000 inhab- itants:										
Buffalo, N. Y.	468,558	171	12	2	98		15		48	21
Cincinnati, Ohio.	410,476	177	10	1	23		2		18	26
Jersey City, N. J.	396,345		27		52		16	1	12	10
Milwaukee, Wis.	436,535	135	12		410	3	25		48	11
Minneapolis, Minn.	363,454		26		36		25			
Newark, N. J.	408,894	159	29	3	413	8	17	2	54	21
New Orleans, La.	371,747		5		4				40	26
San Francisco, Cal.	463,516	177	23	2	71		11	1	27	27
Seattle, Wash.	348,639		5		32		17			
Washington, D. C.	363,980	161	7		476	3	35		35	13
From 200,000 to 300,000 inhab- itants:										
Columbus, Ohio.	214,878	92			35		22		8	9
Denver, Colo.	260,800	101	11		33		28			16
Indianapolis, Ind.	271,708	123	18	2	40		43	2	17	15
Louisville, Ky.	238,910	97	11	1	11	1	3		8	7
Portland, Oreg.	295,463	79	1		502		5		11	7
Providence, R. I.	254,960	125	10	1	170	1	8	2	2	8
Rochester, N. Y.	256,417	90	8	1	57		16		9	6
St. Paul, Minn.	247,232	82	18	3	17		33	3	15	7
From 100,000 to 200,000 inhab- itants:										
Atlanta, Ga.	190,558	89	1		13		3		2	10
Birmingham, Ala.	181,762	44	2		28		1		7	5
Bridgeport, Conn.	121,579	49	9	1	9		1		6	3
Cambridge, Mass.	112,981	52	30		56	1			6	7
Camden, N. J.	106,233		4		21		4		9	
Dallas, Tex.	124,527				18		1		2	3
Dayton, Ohio.	127,224		1		6		3		4	2
Des Moines, Iowa.	101,598		5				22	1		
Fall River, Mass.	128,366	47	2		4				9	8
Fort Worth, Tex.	104,562	29			2		3			
Grand Rapids, Mich.	128,291	56	2		9		11		11	1
Hartford, Conn.	110,900	61	10		9		5		10	1
Houston, Tex.	112,307	45	3		5					2
Lawrence, Mass.	100,500	39	3		9				15	5
Lowell, Mass.	113,245	56			10		1		9	5
Lynn, Mass.	102,425	34	3		17		7		2	5
Memphis, Tenn.	148,995	57	7		6	1	5		13	10
Nashville, Tenn.	117,057	66			18	1	2		6	5
New Bedford, Mass.	118,158	43	3	1	8		4	1	6	5
New Haven, Conn.	149,685	74	4		9				6	5
Oakland, Cal.	198,604	51	2		12	1	3		5	5
Omaha, Nebr.	165,470	51	4		15		19			2
Reading, Pa.	109,381	42	1		66		6		2	1
Richmond, Va.	156,687	57	3		83					2
Salt Lake City, Utah.	117,399	44	3		23		16			
Seranton, Pa.	146,811	73	9	2	11		4		9	4
Spokane, Wash.	150,323		1				3			
Springfield, Mass.	105,942	44	8		28	1	5		3	4
Syracuse, N. Y.	155,624	90	7	1	77	3	6		6	4
Tacoma, Wash.	112,770		1		8		29			
Toledo, Ohio.	191,554	106	2		14		15		16	10
Trenton, N. J.	111,593	59	6		9				6	3
Worcester, Mass.	163,314	74	8	1	7		4		9	3
From 50,000 to 100,000 inhab- itants:										
Akron, Ohio.	85,025		2		8		7		6	
Atlantic City, N. J.	57,660		1	1	26		1		3	
Augusta, Ga.	50,245	19			33				1	

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

City Reports for Week Ended Apr. 13, 1918—Continued.

City.	Population as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.		
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
From 50,000 to 100,000 inhabitants—Continued.											
Bayonne, N. J.	69,893		5		31				4		
Berkeley, Cal.	57,653	14			11		1		2		
Binghamton, N. Y.	53,973	15	2		17		4		6		
Brockton, Mass.	67,449	25			4		5		5		
Canton, Ohio.	60,852	23			2	1	2				
Charleston, S. C.	60,734	37	10	1	5						
Chattanooga, Tenn.	60,075	9			1		1		3		
Covington, Ky.	57,144	21			6				1		
Duluth, Minn.	94,495	30	3						6		
El Paso, Tex.	63,705	63			9		2			19	
Erie, Pa.	75,195	46			33		3		9	6	
Evansville, Ind.	76,078	31	1		5		1		3	1	
Flint, Mich.	54,772	18	2		6		4		8	2	
Fort Wayne, Ind.	76,183	38	2	1	25		2		2	2	
Harrisburg, Pa.	72,015	36	1				2		4	4	
Hoboken, N. J.	77,214	25	2		2				6	2	
Holyoke, Mass.	65,286	24	2		2		2		6	3	
Jacksonville, Fla.	76,101	22			7	1			5	3	
Johnstown, Pa.	68,529	38	2				10	1	1	1	
Kansas City, Kans.	99,437		1		15		1		7		
Lancaster, Pa.	50,853				28						
Little Rock, Ark.	57,343				8		2		6		
Malden, Mass.	51,155	13	17		21		2				
Manchester, N. H.	78,283	31	3	1	9				5	3	
Mobile, Ala.	58,221	25								1	
New Britain, Conn.	53,794	24	5		24		5			1	
Norfolk, Va.	89,612				22		2			2	
Oklahoma City, Okla.	92,943	23			8		2		2	2	
Passaic, N. J.	71,744	20	5		4				2	1	
Portland, Me.	63,867	35	4	1	1		2			2	
Rockford, Ill.	55,185	29			9		1		5	4	
Sacramento, Cal.	66,895		2	1	25		4			3	
Saginaw, Mich.	55,642	15	1		6		2			1	
St. Joseph, Mo.	85,236	40	2		4		1		3	3	
San Diego, Cal.	53,330	32		1	49		6	1		2	
Savannah, Ga.	68,805	39					3		1	6	
Schenectady, N. Y.	99,519	31	1		24				3	2	
Sioux City, Iowa.	57,078		2				10				
Somerville, Mass.	87,039	18	4	1	36		3		3	1	
South Bend, Ind.	68,946	17	1		5				3	2	
Springfield, Ill.	61,120	11	2		48		1			1	
Springfield, Ohio.	51,550	26			3				5	2	
Terre Haute, Ind.	66,083	18	1		2				1	4	
Troy, N. Y.	77,916	32	3	1	2		5		7	5	
Wichita, Kans.	70,722		1		48		3				
Wilkes-Barre, Pa.	76,776	34	3	1	34		2	1	1	3	
Wilmington, Del.	94,265	53	3	1	46	2	2			3	
York, Pa.	51,656		1		14		1		1		
From 25,000 to 50,000 inhabitants:											
Alameda, Cal.	27,732	5	1	1	22		1		1		
Auburn, N. Y.	37,385	14			8		1			1	
Battle Creek, Mich.	29,480		2		109		1				
Beaumont, Tex.	27,711	8									
Bellingham, Wash.	32,985		1								
Bloomington, Ill.	27,258	4	1				1				
Brookline, Mass.	32,730	2	3		35		1				
Burlington, Iowa.	25,030	6								1	
Butler, Pa.	27,632	5	8		19						
Butte, Mont.	43,425						5				
Charlotte, N. C.	39,823	16		1	8						
Chelsea, Mass.	46,192	9	2		38		4		1		
Chicopee, Mass.	29,319	7		1					4		
Clinton, Iowa.	27,386				5		1				
Colorado Springs, Colo.	32,971	10	2		8				5	3	
Columbia, S. C.	34,611				5						
Council Bluffs, Iowa.	31,484	12			7		3	1			
Cumberland, Md.	26,074	4	1		19		8		5	1	
Danville, Ill.	32,261	11			30						
Davenport, Iowa.	48,811		1		2		2				
Dubuque, Iowa.	39,873				1						

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

## City Reports for Week Ended Apr. 13, 1918—Continued.

City.	Population as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.		
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
From 25,000 to 50,000 inhabitants—Continued.											
Durham, N. C.	25,061	8			7				1	1	
Easton, Pa.	30,530	20			15				1	1	
East Orange, N. J.	42,458	12	4		58		2	1	2	2	
Elgin, Ill.	28,203	14	1		1		1				
Elmira, N. Y.	38,120	5	1		18			1		1	
Evanston, Ill.	28,591	5									
Everett, Mass.	39,235	11	1		11		3		2		
Everett, Wash.	35,486						1				
Fitchburg, Mass.	41,781	13			13		3		0	1	
Fort Smith, Ark.	28,638	5			3						
Fresno, Cal.	34,958	11	1		10	1	1				
Galveston, Tex.	41,863	10	1		5					1	
Green Bay, Wis.	29,353	13	2		2		1		1		
Hammond, Ind.	26,171	16								1	
Haverhill, Mass.	48,477	11	2		48				1	1	
Jackson, Mich.	35,363	19		1	13		17	1	1	1	
Jamestown, N. Y.	36,580	14	2						4	2	
Joplin, Mo.	33,216				2		1		2		
Kalamazoo, Mich.	48,886	30					1	1	6	1	
Kenosha, Wis.	31,576	13	10		1		11			1	
Knoxville, Tenn.	38,676				9				4	4	
La Cross, Wis.	31,677	6					1				
Lexington, Ky.	41,097	22			15					2	
Lincoln, Nebr.	46,515	17			1		1			1	
Long Beach, Cal.	27,587	8			23		1		1		
Lorain, Ohio.	36,964		1		2						
Lynchburg, Va.	32,940	10			6				1	1	
Macon, Ga.	45,757	25			1				1	1	
Madison, Wis.	30,099	13	1				8				
McKeesport, Pa.	47,521	15	1		12						
Medford, Mass.	26,234	9			6		9			1	
Moline, Ill.	27,451	16	2	1	9		4				
Montclair, N. J.	26,318	4			26				3		
Montgomery, Ala.	43,285	23	1		11					1	
Mount Vernon, N. Y.	37,009	1	1		10					2	
Muncie, Ind.	25,424	11	1		1		2		2	1	
Muskogee, Okla.	44,218				9						
Nashua, N. H.	27,327	11								1	
Newburgh, N. Y.	29,603	15								5	
New Castle, Pa.	41,133				10		2				
Newport, Ky.	31,927	12	1						3	3	
Newport, R. I.	30,108	4					3				
Newton, Mass.	43,715	10	1		16		1		3	2	
Niagara Falls, N. Y.	37,353	19	1		2		3		5	1	
Norristown, Pa.	31,401	7	1		2				7	1	
Oak Park, Ill.	26,654	11	4		12		1			1	
Ogden, Utah.	31,404	6	1		31		1				
Orange, N. J.	33,080	12	1		30		1			1	
Oshkosh, Wis.	36,065	13			3		2		2		
Pasadena, Cal.	46,450	14			240				2		
Perth Amboy, N. J.	41,185	23			6					2	
Petersburg, Va.	25,582	1			2				2		
Pittsfield, Mass.	38,629	12	2		2		6		2		
Portsmouth, Va.	39,651	13			10		1			2	
Poughkeepsie, N. Y.	30,390	12			72		2		3	1	
Quincy, Ill.	36,798	11	3	1	4		1			2	
Quincy, Mass.	38,136	9	1		36		1			2	
Racine, Wis.	46,486	8	1		50		3			3	
Roanoke, Va.	43,284	18			42				4	4	
Rock Island, Ill.	28,926	12	4		18		3				
Salem, Mass.	48,562	14			25				3	2	
San Jose, Cal.	38,002	3			6		1				
Sheboygan, Wis.	28,559	3			2						
Springfield, Mo.	40,341	6	1	1			2				
Steubenville, Ohio.	27,445	13	1								
Superior, Wis.	46,226	16			1		3				
Taunton, Mass.	36,283	9					2		8		
Topeka, Kans.	48,726	13	1		7		20				
Waco, Tex.	33,385	18			12		1		2		
Walla Walla, Wash.	25,136		1								
Waltham, Mass.	30,570	8	4		55				2	2	



## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

City Reports for Week Ended Apr. 13, 1918—Continued.

City.	Popula- tion as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.		
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
From 25,000 to 50,000 inhabit- ants—Continued.											
Warwick, R. I.	29,969				3						
Watertown, N. Y.	29,894	1			118						
West Hoboken, N. J.	43,139	6			10		9				
Wheeling, W. Va.	43,377	33			9				3	2	
Wilmington, N. C.	29,892	11			17				1	4	
Winston-Salem, N. C.	31,155	22			3				12	5	
Zanesville, Ohio.	30,863	12					1		1	2	
From 10,000 to 25,000 inhabitants:											
Aberdeen, S. Dak.	15,218	2									
Alexandria, La.	15,333	7			2						
Alton, Ill.	22,874	15	2								
Ann Arbor, Mich.	15,010	13			49		1				
Anniston, Ala.	14,112				3						
Appleton, Wis.	17,834				1			1			
Asbury Park, N. J.	14,007	3									
Bakersfield, Cal.	16,874	10			5		1		2	1	
Barre, Vt.	12,169	4							1	1	
Beaver Falls, Pa.	13,332				2						
Bedford, Ind.	10,349	2									
Beloit, Wis.	18,072	5	1		14				1		
Braddock, Pa.	21,685	14	1		1						
Burlington, Vt.	21,617	9						1			
Cairo, Ill.	15,794	7	1							3	
Cape Girardeau, Mo.	10,775						3				
Centralia, Ill.	11,538	2	4	1	2		2		3		
Chanute, Kans.	12,455	1			2		1				
Chillicothe, Ohio.	15,470	4			16		5				
Clinton, Mass.	13,075	5			1		1				
Coffeyville, Kans.	17,548		1		1		6				
Concord, N. H.	22,669	12									
Corpus Christi, Tex.	10,432	3								2	
Dover, N. H.	13,272	2			3						
Dunkirk, N. Y.	20,743	7					1		1	1	
East Providence, R. I.	18,113		1		4						
Eau Claire, Wis.	18,807				18		2				
Elwood, Ind.	11,028				7						
Eureka, Cal.	14,684	2					1				
Fargo, N. Dak.	17,389	3	1	1	5				1		
Fort Scott, Kans.	10,550	2			6				1		
Galesburg, Ill.	24,276	7	4		30						
Grand Forks, N. Dak.	15,837	1									
Greeley, Colo.	11,420	11		3		1	4				
Greensboro, N. C.	19,577				1				2		
Greenville, S. C.	18,181	10			1						
Hackensack, N. J.	16,445	9	1		15						
Harrison, N. J.	16,950		2		1				3		
Hattiesburg, Miss.	16,482	15			1						
Iola, Kans.	11,068		1						1		
Janesville, Wis.	14,339	4			4		3				
Kokomo, Ind.	20,930	13			4				2	2	
La Fayette, Ind.	21,286	9								1	
Lawrence, Kans.	13,324		1						2	2	
Leavenworth, Kans.	19,363	9	4		24				1		
Logansport, Ind.	21,646	3			2						
Long Branch, N. J.	15,395	8								1	
Manitowoc, Wis.	13,805	5									
Marinette, Wis.	14,610	10					1				
Marion, Ind.	19,834	1	2		1						
Marshall, Tex.	13,712	4	1						1		
Mason City, Iowa	14,457	3					2				
Melrose, Mass.	17,445	7									
Michigan City, Ind.	21,512	13	1						1		
Mishawaka, Ind.	16,385	4	1		11				1		
Missoula, Mont.	18,214	6								2	
Morgantown, W. Va.	13,700	4									
Morristown, N. J.	13,284	7			2						
Moundsville, W. Va.	11,153	8								2	
Nanticoke, Pa.	23,126	9	1		1		3				
New Albany, Ind.	23,629	10							1		
Newburyport, Mass.	15,243	6			7					1	
New Castle, Ind.	13,241	4	1				4				

1 Population Apr. 15, 1910; no estimate made.



## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

City Reports for Week Ended Apr. 13, 1918—Continued.

City.	Popula- tion as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 10,000 to 25,000 inhabit- ants—Continued.										
New London, Conn.	20,985	13	1	3	1	1	1	1	1	1
North Adams, Mass.	22,019	7	1	1	1	1	1	1	1	1
Northampton, Mass.	19,926	12	1	3	4	1	1	1	2	2
North Little Rock, Ark.	14,907	2	1	4	4	1	1	1	1	1
North Yakima, Wash.	20,951	1	26	6	1	1	1	1	1	1
Palestine, Tex.	11,854	5	5	2	6	1	1	1	1	1
Parkersburg, W. Va.	20,612	5	2	6	3	1	1	1	1	1
Plainfield, N. J.	23,805	18	2	7	3	1	1	1	1	1
Pomona, Cal.	13,150	6	6	10	4	1	1	1	1	1
Pontiac, Mich.	17,524	17	6	4	4	1	1	1	1	1
Portsmouth, N. H.	11,666	4	1	6	5	1	1	1	1	1
Provo, Utah.	10,645	4	1	1	1	1	1	1	1	1
Rahway, N. J.	10,219	12	1	11	2	1	1	1	1	1
Raleigh, N. C.	20,127	3	2	12	1	1	1	1	1	1
Redlands, Cal.	14,000	6	2	6	1	1	1	1	1	1
Reno, Nev.	14,869	9	3	24	3	1	1	1	1	1
Richmond, Ind.	24,697	8	1	7	1	1	1	1	1	1
Riverside, Cal.	19,763	5	1	2	1	1	1	1	1	1
Rocky Mount, N. C.	12,067	8	1	7	1	1	1	1	1	1
Salina, Kans.	12,098	8	1	7	1	1	1	1	1	1
Sandusky, Ohio.	20,193	2	1	24	1	1	1	1	1	1
Santa Ana, Cal.	10,627	6	1	1	3	1	1	1	1	1
Saratoga Springs, N. Y.	13,821	6	2	1	3	1	1	1	1	1
Shelbyville, Ind.	10,965	15	2	2	1	1	1	1	1	1
Spartanburg, S. C.	21,365	3	3	2	1	1	1	1	1	1
Steelton, Pa.	15,548	5	1	9	1	1	1	1	1	1
Vallejo, Cal.	13,461	15	1	15	1	1	1	1	1	1
Vancouver, Wash.	13,180	27	1	27	1	1	1	1	1	1
Washington, Pa.	21,618	3	1	1	5	1	1	1	1	1
Wausau, Wis.	19,239	7	1	20	1	1	1	1	1	1
West Orange, N. J.	13,550	4	1	16	1	1	1	1	1	1
West Warwick, R. I.	15,782	7	1	1	1	1	1	1	1	1
Wilkinsburg, Pa.	23,228	5	1	1	1	1	1	1	1	1
Woburn, Mass.	15,969	5	1	1	1	1	1	1	1	1

¹ Population Apr. 15, 1910; no estimate made.

## FOREIGN.

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### ALGERIA.

#### Epidemic Smallpox—Algiers.

Smallpox in epidemic form was reported, April 23, 1918, at Algiers, with 200 cases present. The occurrence was reported both among Europeans and natives.

### CHINA.

#### Cerebrospinal Meningitis—Amoy.

Cerebrospinal meningitis was reported present at Amoy, China, March 12, 1918. The cases occurred in the native city.

#### Cerebrospinal Meningitis—Hankow.

Cerebrospinal meningitis was reported prevalent among children in the native city of Hankow, China, March 22, 1918.

#### Further Relative to Plague—Shansi Province.<sup>1</sup>

The outbreak of pneumonic plague previously reported as occurring in Shansi Province, China, in February, 1918, was first observed in the vicinity of Wuyuan and Saratsi during the latter part of December, 1917. Reports under date of February 18, 1918, show an extensive prevalence of the disease in the Province, with an estimated occurrence from January 14 to 18 of 1,000 fatal cases in the vicinity of Paotongchen.

### CUBA.

#### Deratization of Vessels from New Orleans—Habana.

According to Cuban quarantine circular dated April 15, 1918, vessels arriving at Habana from New Orleans will be required to be deratized only once in three months, provided such vessels, while at New Orleans, have remained not less than 8 feet from the wharf with their cables protected with rat guards.

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<sup>1</sup> Public Health Reports, Apr. 19, 1918, p. 596.

**CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER.****Reports Received During Week Ended May 3, 1918.<sup>1</sup>****CHOLERA.**

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Madras.....	Feb. 3-9.....	2	2	
Rangoon.....	Jan. 27-Feb. 2.....	1		
Indo-China:				
Cochin-China—				
Saigon.....	Feb. 25-Mar. 11...	3	3	
Philippine Islands:				
Provinces.....				Mar. 3-9, 1918: Cases, 91; deaths, 70.
Bohol.....	Mar. 3-9.....	43	30	
Capiz.....	do.....	5	5	
Cebu.....	do.....	4	3	
Leyte.....	do.....	6	2	
Misamis.....	do.....	22	17	
Occidental Negros.....	do.....	8	6	
Zamboanga.....	do.....	3	7	

**PLAGUE.**

British East Africa:				
Mombasa.....	Oct. 1-Dec. 31.....	31	18	
China:				
Nanking.....	Mar. 18.....			Present.
India:				
Bassein.....	Jan. 20-Feb. 2.....		23	
Henzada.....	do.....		20	
Madras.....	Feb. 3-9.....	2	1	
Madras Presidency.....	do.....	1,537	1,171	
Mandalay.....	Jan. 11-Feb. 2.....		391	
Myingyan.....	do.....		125	
Rangoon.....	Jan. 27-Feb. 9.....	109	102	
Toungoo.....	Jan. 20-Feb. 2.....		8	
Indo-China:				
Cochin-China—				
Saigon.....	Feb. 25-Mar. 17...	24	16	
Siam:				
Bangkok.....	Feb. 10-Mar. 2.....	9	5	

**SMALLPOX.**

Algeria:				
Algiers.....	Apr. 23.....	209		Apr. 1-23, 1918: Deaths, 30.
British East Africa:				
Mombasa.....	Oct. 1-Dec. 31.....	9	5	
Canada:				
British Columbia—				
Winnipeg.....	Apr. 7-13.....	2		
China:				
Tsingtau.....	Mar. 10-23.....	5		
France:				
Paris.....	Mar. 3-9.....	3	1	
India:				
Madras.....	Feb. 3-9.....	6	6	
Rangoon.....	Jan. 27-Feb. 9.....	28	4	
Indo-China:				
Cochin-China—				
Saigon.....	Feb. 25-Mar. 17...	283	94	
Italy:				
Genoa.....	Mar. 1-15.....	11	3	
Japan:				
Nagasaki.....	Mar. 18-31.....	3	1	
Newfoundland:				
St. Johns.....	Mar. 30-Apr. 12...	15		
Philippine Islands:				
Manila.....	Mar. 3-9.....	1		Varioloid, 13.
Porto Rico:				
San Juan.....	Apr. 1-7.....			Varioloid, 31
Siam:				
Bangkok.....	Feb. 10-Mar. 2.....	14	5	

<sup>1</sup> From medical officers of the Public Health Service, American consuls, and other sources.

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—** Continued.

**Reports Received During Week Ended May 3, 1918—Continued.**

## **TYPHUS FEVER.**

Place.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary:				
Hungary.....				Present in December, 1917.
Germany.....				Jan. 1-30, 1918: Cases, 66.
Japan:				
Nagasaki.....	Mar. 18-31.....	1	1	
Lithuania.....				Dec. 30, 1917-Jan. 5, 1918: Cases, 195.
Newfoundland:				
St. Johns.....	Mar. 30-Apr. 5.....	1	1	
Poland.....				Dec. 23, 1917-Jan. 12, 1918: Cases 3,026; deaths, 315.

**Reports Received from Dec. 29, 1917, to Apr. 26, 1918.**

## **CHOLERA.**

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Antung.....	Nov. 26-Dec. 2.....	3	1	
India:				
Bombay.....	Oct. 28-Dec. 15.....	19	14	
Calcutta.....	Dec. 30-Jan. 26.....	200	170	
Do.....	Sept. 16-Dec. 15.....		135	
Karachi.....	Dec. 30-Jan. 26.....		21	
Madras.....	do.....	25	6	
Do.....	Nov. 25-Dec. 22.....	2	2	
Rangoon.....	Dec. 30-Jan. 26.....	35	17	
Do.....	Nov. 4-Dec. 22.....	5	5	
Indo-China:				
Provinces.....	Dec. 30-Jan. 5.....	1	1	
Anam.....				Sept. 1-Nov. 30, 1917: Cases, 152; deaths, 89.
Cambodia.....	Sept. 1-Nov. 30.....	18	13	
Cochin-China.....	do.....	72	52	
Saigon.....	do.....	50	22	
Do.....	Nov. 22-Dec. 9.....	4	3	
Kwang-Chow-Wan.....	Feb. 4-17.....	4		
Java:	Sept. 1-30.....	10	2	
East Java.....				
West Java.....	Oct. 28-Nov. 3.....	1	1	
Batavia.....				Oct. 19-Dec. 27, 1917: Cases, 102; deaths, 56. Dec. 28, 1917-Jan. 31, 1918: Cases, 27; deaths, 7.
Persia:	Oct. 19-Dec. 27.....	49	23	
Mazanderan Province.....	Dec. 28-Jan. 31.....	24	1	
Achraf.....				July 30-Sept. 3, 1917: Cases, 384; deaths, 276.
Astrabad.....	July 30-Aug. 16.....	90	88	Present.
Barfrush.....	July 31.....			
Chahmirzad.....	July 1-Aug. 16.....	39	25	
Chahrastagh.....				25 cases reported July 31, 1917.
Charoud.....	June 15-July 25.....	10	8	
I amghan.....	Aug. 26-Sept. 3.....	4	2	
Kharek.....	Aug. 26.....			Present.
Meched.....	May 28-June 11.....	21	13	
Ouzoun Dare.....	Aug. 18-Sept. 2.....	174	82	
Sabzevar.....	Aug. 8.....			Do.
Sari.....	Aug. 24.....			Do.
Semman.....	July 3-29.....	273	144	
Yekchambe Bazar.....	Aug. 31-Sept. 2.....	14	5	
Philippine Islands:	June 3.....	6		
Provinces.....				
Antique.....	Nov. 18-Dec. 1.....	48	32	Nov. 18-Dec. 29, 1917: Cases, 1,053; deaths, 693. Dec. 30, 1917-Mar. 2, 1918: Cases, 1,253; deaths, 798.
Bohol.....	Feb. 3-9.....	4	4	
Do.....	Nov. 18-Dec. 29.....	169	111	
Capiz.....	Dec. 30-Mar. 2.....	339	274	
Do.....	Nov. 25-Dec. 29.....	27	21	
Cebu.....	Dec. 30-Mar. 2.....	202	168	
Do.....	Dec. 23-29.....	3		
Iloilo.....	Dec. 30-Mar. 2.....	79	42	
Do.....	Nov. 25-Dec. 29.....	179	135	
Leyte.....	Dec. 30-Mar. 2.....	97	63	
Do.....	Nov. 25-Dec. 22.....	13	12	
Do.....	Feb. 3-Mar. 2.....	38	33	

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—** Continued.

**Reports Received from Dec. 29, 1917, to Apr. 26, 1918—Continued.**

## **CHOLERA—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Philippine Islands—Contd.				
Provinces—Contd.				
Mindanao.....	Nov. 25-Dec. 29....	337	196	
I o.....	Dec. 30-Feb. 9....	351	220	
Misamis.....	Feb. 24-Mar. 2....	33	21	
Occidental Negros.....	Nov. 25-Dec. 22....	177	123	
I o.....	Jan. 13-Mar. 2....	88	57	
Oriental Negros.....	Nov. 25-Dec. 29....	99	62	
I o.....	Dec. 30-Feb. 16....	17	14	
Romblon.....	Nov. 25-Dec. 1....	1	1	
Surigao.....	Feb. 24-Mar. 2....	8	5	
Zamboanga.....	do.....	12	7	
Siam:				
Bangkok.....	Sept. 16-22.....	1	1	
Turkey in Asia:				
Bagdad.....	Nov. 1-15.....		40	

## **PLAGUE.**

Brazil:				
Bahia.....	Nov. 4-Dec. 13....	4	4	
Do.....	Dec. 30-Feb. 23....	4	3	
Rio de Janeiro.....	Dec. 23-29.....	1		
Do.....	Jan. 6-12.....	1	1	
British Gold Coast:				
Axim.....	Jan. 8.....			Present.
Ceylon:				
Colombo.....	Oct. 14-Dec. 1....	14	13	
Do.....	Dec. 30-Jan. 19....	7	5	
China:				
Anhwei Province—				Present in North China in Janu-
Fengyanghsien.....	Feb. 27.....		9	ary, 1918; pneumonic form.
Pengpu.....	do.....		1	Pneumonic.
Chili Province—				Do.
Kalgan.....				Vicinity. Present in February,
Shansi Province.....				1918.
				Present in February, 1918; 116
				cases estimated.
Ecuador:				
Babahoyo.....	Feb. 1-15.....	1		
Duran.....	do.....	1	1	
Guayaquil.....	Sept. 1-Nov. 30....	68	24	Reported outbreak occurring
Do.....	Feb. 1-15.....	44	18	about Jan. 17, 1918.
Do.....	Mar. 1-15.....	20	7	
Egypt:				
Alexandria.....	Jan. 14-28.....	1	2	Jan. 1-Nov. 15, 1917: Cases, 728;
Port Said.....	July 23-29.....	1	2	deaths, 398.
India:				
Bassein.....	Dec. 9-29.....		8	Sept. 16-Dec. 29, 1917: Cases,
Do.....	Dec. 30-Jan. 19....		14	228,834; deaths, 174,743. Dec.
Bombay.....	Oct. 28-Dec. 29....	147	123	30, 1917-Jan. 26, 1918: Cases,
Do.....	Dec. 30-Jan. 26....	81	50	123,934; deaths, 98,950.
Calcutta.....	Sept. 16-29.....		2	
Do.....	Dec. 30-Jan. 12....		3	
Henzada.....	Oct. 21-27.....		1	
Do.....	Jan. 5-19.....		5	
Karachi.....	Oct. 21-Dec. 29....	27	20	
Do.....	Dec. 30-Jan. 26....	16	14	
Madras Presidency.....	Oct. 31-Nov. 24....	5,786	4,519	
Do.....	Jan. 6-Feb. 2....	7,062	5,428	
Mandalay.....	Oct. 14-Nov. 17....		89	
Do.....	Dec. 30-Jan. 12....		236	
Myingyan.....	do.....		110	
Promé.....	Jan. 5-12.....		1	
Rangoon.....	Oct. 21-Dec. 22....		56	
Do.....	Dec. 30-Jan. 26....	70	74	
Toungoo.....	Dec. 9-29.....		5	
Do.....	Dec. 30-Jan. 19....		4	
Indo-China:				
Provinces.....				
Anam.....	Sept. 1-Nov. 30....	28	25	Sept. 1-Nov. 30, 1917: Cases, 89;
Cambodia.....	do.....	39	28	deaths, 68.
Cochin-China.....	do.....	22	15	
Saigon.....	Oct. 31-Dec. 23....	17	6	
Do.....	Dec. 31-Feb. 24....	74	31	

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—** Continued.

**Reports Received from Dec. 29, 1917, to Apr. 26, 1918—Continued.**

## **PLAGUE—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Java:				
East Java.....				Oct. 8-Dec. 31, 1917: Cases, 196; deaths, 193.
Do.....				Jan. 1-14, 1918: Cases, 22; deaths, 21.
Residences—				
Kediri.....	Oct. 8-Dec. 31....	1	1	
Madioen.....	do.....	49	49	
Samarang.....	do.....	110	109	
Surabaya.....	do.....	25	23	
Surakarta.....	do.....	11	11	
West Java.....				Nov. 25-Dec. 9, 1917: Cases, 45; deaths, 45.
Do.....				Dec. 1, 1917-Jan. 15, 1918: Cases, 106.
Peru:				
Ancachs Department—				
Casma.....	Dec. 1-Jan. 15....	2		
Lambayeque Department.....	do.....	22		At Chiclayo, Ferrenafe, Jayanca, Lambayeque.
Libertad Department.....	do.....	72		At Guadalupe, Mansiche, Pacasmayo, Salaverry, San Jose, San Pedro, and country district of Trujillo.
Lima Department.....	do.....	9		City and country.
Piura Department—				
Catacaos.....	do.....	1		
Senegal:				
St. Louis.....	Feb. 2.....			Present.
Siam:				
Bangkok.....	Sept. 16-Dec. 23....	13	9	
Do.....	Jan. 13-Feb. 9.....	15	11	
Straits Settlements:				
Singapore.....	Oct. 28-Dec. 29....	5	7	
Do.....	Jan. 6-Feb. 16.....	29	28	

## **SMALLPOX.**

Algeria:				
Algiers.....	Nov. 1-Dec. 31....	3	2	
Do.....	Jan. 1-Feb. 28....	13		
Australia:				
New South Wales.....				July 12-Dec. 20, 1917: Cases, 36.
Abermain.....	Oct. 25-Nov. 29....	3		Jan. 4-17, 1918: Case, 1.
Cessnock.....	July 12-Oct. 11....	7		Newcastle district.
Eumangla.....	Aug. 15.....	1		
Kurri Kurri.....	Dec. 5-20.....	2		
Mungindi.....	Aug. 13.....	1		
Warren.....	July 12-Oct. 25....	22		
Do.....	Jan. 1-17.....	1		
Brazil:				
Bahia.....	Nov. 10-Dec. 8....	3		
Pernambuco.....	Nov. 1-15.....	1		
Rio de Janeiro.....	Sept. 30-Dec. 29....	703	190	
Do.....	Dec. 30-Mar. 9....	231	83	
Sao Paulo.....	Oct. 29-Nov. 4....		2	
Canada:				
British Columbia—				
Vancouver.....	Jan. 13-Mar. 9....	5		
Victoria.....	Jan. 7-Feb. 2.....	2		
Winnipeg.....	Dec. 30-Mar. 30....	2		
New Brunswick—				
Kent County.....	Dec. 4.....			Outbreak. On main line Canadian Ry., 25 miles north of Moncton.
Do.....	Jan. 22.....	40		In 7 localities.
Northumberland County.....	do.....	41		In 5 localities.
Restigouche County.....	Jan. 18.....	60		
St. John County—				
St. John.....	Mar. 3-Apr. 6....	5		
Victoria County.....	Jan. 22.....	10		At Amestone and a lumber camp.
Westmoreland County—				
Moncton.....	Jan. 20-Apr. 6....	16		
York County.....	Jan. 22.....	8		



# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—** Continued.

**Reports Received from Dec. 29, 1917, to Apr. 26, 1918—Continued.**

## **SMALLPOX—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Canada—Continued.</b>				
Nova Scotia—				
Halifax.....	Feb. 24-Apr. 6.....	6		
Sydney.....	Feb. 3-Apr. 6.....	15		
Ontario—				
Arnprior.....	Mar. 31-Apr. 6.....		1	
Hamilton.....	Dec. 16-22.....	1		
Do.....	Jan. 13-19.....	2		
Ottawa.....	Mar. 4-24.....	5		
Sarnia.....	Dec. 9-15.....	1		
Do.....	Jan. 6-Mar. 30.....	32		
Toronto.....	Feb. 10-Apr. 6.....	2		
Windsor.....	Dec. 30-Jan. 5.....	1		
Prince Edward Island—				
Charlottetown.....	Feb. 7-13.....	1		
Quebec—				
Montreal.....	Dec. 16-Jan. 5.....	5		
Do.....	Jan. 6-Apr. 6.....	12		
<b>China:</b>				
Amoy.....	Oct. 22-Dec. 30.....			Present.
Do.....	Dec. 31-Feb. 10.....			Do.
Antung.....	Dec. 2-23.....	13	3	
Do.....	Jan. 7-Feb. 17.....	6	2	
Changsha.....	Jan. 28-Mar. 10.....		1	
Chefoo.....	Jan. 27-Feb. 9.....			Do.
Chungking.....	Nov. 11-Dec. 29.....			Do.
Do.....	Dec. 30-Feb. 16.....			Do.
Dairen.....	Nov. 18-Dec. 22.....	3	1	
Do.....	Dec. 30-Mar. 16.....	39	2	
Hankow.....	Feb. 25-Mar. 3.....	1		
Harbin.....	May 14-June 30.....	20		Chinese Eastern Ry.
Do.....	July 1-Dec. 2.....	7		Do.
Hongkong.....	Dec. 23-29.....	1		
Do.....	Jan. 26-Feb. 9.....	6	1	
Hungtahoitz Station.....	Oct. 28-Nov. 4.....	1		Do.
Manchuria Station.....	May 14-June 30.....	6		Do.
Do.....	July 1-Dec. 2.....	3		Do.
Mukden.....	Nov. 1-24.....			Present.
Nanking.....	Feb. 3-Mar. 16.....			Epidemic.
Shanghai.....	Nov. 18-Dec. 23.....	41	91	Cases, foreign; deaths among natives.
Do.....	Dec. 31-Mar. 10.....	36	106	Do.
Swatow.....	Jan. 18.....			Unusually prevalent.
Tientsin.....	Nov. 11-Dec. 22.....	13		
Do.....	Dec. 30-Mar. 9.....	27		
Tsingtau.....	Feb. 4-23.....	3		
<b>Cuba:</b>				
Habana.....	Jan. 7.....	1		Nov. 8, 1917: 1 case from Coruná;
Marianao.....	Jan. 8.....	1		Dec. 5, 1917, 1 case.
<b>Ecuador:</b>				
Guayaquil.....	Sept. 1-Nov. 30.....	26	2	6 miles distant from Habana.
Do.....	Feb. 1-15.....	3	3	
<b>Egypt:</b>				
Alexandria.....	Nov. 12-18.....	2	1	
Do.....	Jan. 8-Feb. 28.....	5		
Cairo.....	July 23-Nov. 18.....	6	1	
<b>France:</b>				
Lyon.....	Nov. 18-Dec. 16.....	6	3	
Do.....	Jan. 7-Feb. 17.....	11	2	
Marseille.....	Jan. 1-31.....		2	
Paris.....	Jan. 27-Mar. 2.....	5	1	
<b>Great Britain:</b>				
Cardiff.....	Feb. 3-9.....	4		
Hull.....	Mar. 17-23.....	1		
<b>Greece:</b>				
Sabatini.....	Jan. 27-Mar. 16.....		9	
<b>Honduras:</b>				
Santa Barbara Department.....	Jan. 1-7.....			Present in interior.
<b>India:</b>				
Bombay.....	Oct. 21-Dec. 29.....	50	12	
Do.....	Dec. 31-Jan. 25.....	26	5	
Korachi.....	Nov. 18-Dec. 29.....	4	2	
Madras.....	Oct. 31-Dec. 29.....	20	8	Nov. 11-16, 1917: 10 cases with 4
Do.....	Dec. 30-Feb. 2.....	96	32	deaths; imported on s. s. Me-
Rangoon.....	Oct. 28-Dec. 22.....	6	1	nesa from Basrah.
Do.....	Dec. 30-Jan. 26.....	7	2	

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—** Continued.

Reports Received from Dec. 29, 1917, to Apr. 26, 1918—Continued.

## **SMALLPOX—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Indo-China:</b>				
Provinces.....				Sept. 1-Nov. 30, 1917: Cases, 546; deaths, 146.
Anam.....	Sept. 1-Nov. 30.....	163	25	
Cambodia.....	do.....	16	8	
Cochin-China.....	do.....	353	108	
Saigon.....	Oct. 20-Dec. 30.....	120	26	
Do.....	Dec. 31-Feb. 24.....	404	146	
Laos.....	Oct. 1-31.....	1		
Do.....	Jan. 26-Feb. 3.....	1	1	
Tonkin.....	Sept. 1-Oct. 31.....	9	4	
Do.....	Jan. 26-Feb. 3.....	3		
<b>Italy:</b>				
Castellamare.....	Dec. 10.....	2		Among refugees.
Florence.....	Dec. 1-15.....	17	4	
Genoa.....	Dec. 2-31.....	11	3	
Do.....	Jan. 2-31.....	30	2	
Leghorn.....	Jan. 7-Mar. 10.....	32	7	
Messina.....	Jan. 3-19.....	1		
Milan.....				Oct. 1-Dec. 31, 1917: Cases, 32.
Naples.....	To Dec. 10.....	2		Among refugees.
Taormina.....	Jan. 20-Feb. 9.....	6		
Turin.....	Oct. 29-Dec. 29.....	123	120	
Do.....	Jan. 21-Mar. 3.....	56	3	
<b>Japan:</b>				
Nagasaki.....	Jan. 14-Mar. 10.....	6	2	
Taihoku.....	Dec. 15-21.....	1		Island of Taiwan (Formosa).
Do.....	Jan. 8-Mar. 11.....	25	5	Do.
Tokyo.....	Feb. 11-Mar. 6.....	26		City and suburbs.
Yokohama.....	Jan. 17-Feb. 3.....	4		
<b>Java:</b>				
East Java.....	Oct. 7-Dec. 23.....	50		Dec. 25-31, 1917: Cases, 7. Jan. 1-14, 1918: Cases, 3.
Surabaya.....	Dec. 25-31.....	1		
Mid-Java.....				Oct. 10-Dec. 26, 1917: Cases, 86; death, 1. Dec. 28, 1917-Jan. 23, 1918: Cases, 23.
Samarang.....	Nov. 6-Dec. 12.....	4	1	
West Java.....				Oct. 19-Dec. 27, 1917: Cases, 231; deaths, 36. Dec. 28, 1917-Jan. 31, 1918: Cases, 116; deaths, 17.
Batavia.....	Nov. 2-8.....	1		
<b>Mexico:</b>				
Aguascalientes.....	Feb. 4-17.....		2	
Ciudad Juarez.....	Mar. 3-23.....	2	1	
Mazatlan.....	Dec. 5-11.....		1	
Do.....	Jan. 29-Apr. 2.....	4	4	
Mexico City.....	Nov. 11-Dec. 29.....	16		
Do.....	Dec. 30-Mar. 30.....	90		
Piedras Negras.....	Jan. 11.....	200		
Vera Cruz.....	Jan. 20-Mar. 2.....	7	3	
<b>Newfoundland:</b>				
St. Johns.....	Dec. 8-Jan. 4.....	29		
Do.....	Jan. 5-Mar. 29.....	61		
Trepassey.....	Jan. 4.....			Outbreak with 11 cases reported.
<b>Philippine Islands:</b>				
Manila.....	Oct. 28-Dec. 8.....	5		
Do.....	Jan. 13-Mar. 16.....	20	4	Varioloid, 56.
Porto Rico:				
San Juan.....	Jan. 28-Mar. 31.....	33		Varioloid.
<b>Portugal:</b>				
Lisbon.....	Nov. 4-Dec. 15.....	2		
Do.....	Dec. 30-Mar. 16.....	6		
<b>Portuguese East Africa:</b>				
Lourenço Marques.....	Aug. 1-Dec. 31.....		16	
<b>Russia:</b>				
Archangel.....	Sept. 1-Oct. 31.....	7		
Moscow.....	Aug. 26-Oct. 6.....	22	2	
Petrograd.....	Aug. 31-Nov. 18.....	76	3	
<b>Siam:</b>				
Bangkok.....	Nov. 25-Dec. 1.....	1	1	
Do.....	Jan. 6-19.....	1	1	
<b>Spain:</b>				
Coruna.....	Dec. 2-15.....		4	
Do.....	Jan. 20-Feb. 23.....		5	
Madrid.....				Jan. 1-Dec. 31, 1917: Deaths, 77.
Seville.....	Oct. 1-Dec. 30.....		66	
Do.....	Jan. 1-31.....		20	
Valencia.....	Jan. 27-Feb. 2.....	1		
<b>Straits Settlements:</b>				
Singapore.....	Nov. 25-Dec. 1.....	1	1	
Do.....	Dec. 30-Jan. 5.....	1		

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—** Continued.

**Reports Received from Dec. 29, 1917, to Apr. 26, 1918—Continued.**

## **SMALLPOX—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Tunisia:				
Tunis.....	Dec. 14-20.....	1		
Turkey in Asia:				
Bagdad.....				Present in November, 1917.
Union of South Africa:				
Cape of Good Hope State...	Oct. 1-Dec. 31.....	28		
East Liverpool.....	Jan. 20-26.....	1		Varioloid.
Venezuela:				
Maracaibo.....	Dec. 2-8.....		1	

## **TYPHUS FEVER.**

Algeria:				
Algiers.....	Nov. 1-Dec. 31....	2	1	
Argentina:				
Rosario.....	Dec. 1-31.....		1	
Australia:				
South Australia.....				Nov. 11-17, 1917: Cases, 1.
Brazil:				
Rio de Janeiro.....	Oct. 28-Dec. 1....	7		
Canada:				
Ontario—				
Kingston.....	Dec. 2-8.....	3		
Quebec—				
Montreal.....	Dec. 16-22.....	2	1	
China:				
Antung.....	Dec. 3-30.....	13	1	
Do.....	Dec. 31-Jan. 27....	2	2	
Chosen (Korea):				
Seoul.....	Nov. 1-20.....	1		
Do.....	Feb. 1-28.....	3	2	
Egypt:				
Alexandria.....	Nov. 8-Dec. 28....	57	15	
Do.....	Jan. 8-Mar. 11....	409	98	
Cairo.....	July 23-Dec. 16....	137	70	
Port Said.....	July 30-Nov. 11....	5	5	
France:				
Marseille.....	Dec. 1-31.....		1	
Great Britain:				
Belfast.....	Feb. 10-Mar. 30....	21	3	
Dublin.....	Mar. 24-30.....	3		
Glasgow.....	Dec. 21.....	1		
Do.....	Jan. 20-Mar. 23....	12		
Manchester.....	Dec. 2-8.....	1		
Greece:				
Arta.....	Feb. 19.....	2		
Janina.....	Feb. 14.....	110		Jan. 27, epidemic.
Saloniki.....	Nov. 11-Dec. 29....		72	
Do.....	Dec. 30-Mar. 16....		27	
Italy:				
San Remo.....	Mar. 10-16.....	2		
Japan:				
Nagasaki.....	Nov. 26-Dec. 16....	5	5	
Do.....	Jan. 7-Mar. 10....	13	5	
Java:				
East Java.....				Oct. 15-Dec. 31, 1917: Cases, 39;
Surabaya.....	Dec. 17-31.....	6	1	deaths, 7. Jan. 1-14, 1918:
Do.....	Jan. 1-14.....	10		Cases, 11; deaths, 2.
Mid-Java.....				Oct. 10-Dec. 26, 1917: Cases, 63;
Samarang.....	Oct. 9-Dec. 26....	20	2	deaths, 2. Dec. 28, 1917-Jan.
Do.....	Dec. 27-Jan. 15....	18		23, 1918: Cases, 11.
West Java.....				Oct. 19-Dec. 27, 1917: Cases, 94;
Batavia.....	Oct. 19-Dec. 27....	59	15	deaths, 17. Dec. 28, 1917-Jan.
Do.....	Dec. 28-Jan. 31....	27	1	31, 1918: Cases, 53; deaths, 1.
Mexico:				
Aguascalientes.....	Dec. 15.....		3	
Do.....	Jan. 21-Apr. 7....		14	
Durango State—				
Guanacevi.....	Feb. 11.....			Epidemic.
Mexico City.....	Nov. 11-Dec. 29....	476		
Do.....	Dec. 30-Mar. 30....	627		
Norway:				
Bergen.....	Feb. 1-16.....	3		

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—** Continued.

**Reports Received from Dec. 29, 1917, to Apr. 26, 1918—Continued.**

## **TYPHUS FEVER—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Portugal:				
Lisbon.....	Mar. 3-16.....	8		Feb. 21: Present.
Oporto.....	Dec. 1-31.....	23	4	
Do.....	Jan. 1-Mar. 8.....	1,811	161	
Russia:				
Archangel.....	Sept. 1-14.....	7	2	Present.
Moscow.....	Aug. 26-Oct. 6.....	49	2	
Petrograd.....	Aug. 31-Nov. 18.....	32		
Do.....	Feb. 2.....			
Vladivostok.....	Oct. 29-Nov. 4.....	12	1	
Spain:				
Corcubion.....	Apr. 11.....			Present. Province of Coruna, west coast.
Sweden:				
Goteborg.....	Nov. 18-Dec. 15.....	2		
Switzerland:				
Basel.....	Jan. 6-19.....	1	1	
Zurich.....	Nov. 9-15.....	2		
Do.....	Jan. 13-19.....	2		
Tunisia:				
Tunis.....	Nov. 30-Dec. 6.....		1	Of these, 26 in outbreak in prison.
Do.....	Feb. 9-Mar. 15.....	35	5	
Union of South Africa:				
Cape of Good Hope State...	Sept. 10-Dec. 30.....	4,035	830	Sept. 10-Nov. 25, 1917: Cases, 3,724 (European, 31); deaths, 761 (European, 5). Total to Jan. 27, 1918: Cases, 4,248 (European, 32); deaths, 866 (European, 5).
Natal.....				From date of outbreak in December, 1917, to Jan. 27, 1918: Cases, 34; deaths, 10.

## **YELLOW FEVER.**

Ecuador:				
Babahoyo.....	Feb. 1-15.....	1	1	
Guayaquil.....	Sept. 1-Nov. 30.....	5	3	
Do.....	Feb. 1-15.....	1		
Do.....	Mar. 1-15.....	1	1	
Milagro.....	Feb. 1-15.....	1	1	
Yaguachi.....	Nov. 1-30.....	1		
Guatemala:				
Retalhuleu.....	Apr. 22.....			Present. About 25 miles from Champerico, Pacific port.
Honduras:				
Tegucigalpa.....	Dec. 15-22.....		1	
Do.....	Jan. 6-19.....		1	

